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TRAINING AND RECRUITMENT OF AGRICULTURAL ECONOMIC PERSONNEL: I. A GENERAL VIEW

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Farm Foundation

AGRICULTURAL economics has made very great progress in the past forty years, but for major accomplishments we look to the future. I wish, therefore, to emphasize particularly the importance of enlisting men of unusual intelligence, objective purposefulness, and originality. The rarest of all are the men who have a spark of originality. Men who have this spark should be diligently sought, for they are essential to the progress of scientific work in any field. These are the men who see the important relations of things which others have overlooked. According to Professor A. N. Whitehead of Harvard: "It requires a very unusual mind to undertake the analysis of the obvious." These qualities are not always easy to detect in youth. We may find it necessary to train many men in order to find the few who will become the leaders in the development of our subject. Of course, there will always be need for well-trained men without originality to work under supervision.

The best starting point in training agricultural economists is the study of economic geography, with specific crops, livestock, and types of farm organization in the foreground. This study will gradually build up in the mind of the student a mental picture of agriculture in its whole economic setting in the national life. Methods of production, marketing, processing, and final distribution of farm products will be visualized as an integral part of the whole national and world economy. This is essential to the comprehension of economic forces in action.

Economic history with agriculture in the foreground is just as important as economic geography in the training of the agricultural economist. Geography gives a horizontal or contemporary view, agricultural history gives a vertical or long-time view of man in his effort to make a living by farming and to adjust his relations with those in other occupations. It takes the historical point of view as well as personal experience to give weight to the judgment. To make the study of economic geography and history a meaningful and inspiring introduction to agricultural economics, the teacher himself must know agriculture and be thoroughly grounded in economics, both theoretical and institutional.

It is important both in the fields of geography and history to study other countries than one's own, also parts of one's own country other than that in which one grew up. Prior to the time that I went to Europe in 1899, I had no first-hand knowledge of agriculture other than that of the Corn Belt of the United States, and I always thought in terms of Corn Belt agriculture. While walking over the fields of Germany studying German agriculture in the light of its geography and its history, I came to understand the agriculture of the Corn Belt in a way I had never understood it before. It was this study in historical and comparative agriculture that gave to me the idea that we must analyze the cropping systems from the standpoint of competing and supplementary crops as well as from the standpoint of the tilth-giving and weed-killing effects of the culture, if we are to understand the choice of crops and the systems of crop rotation in any given area.

Economic theory, which is an effort to formulate the relations which exist in the economic world, is tremendously important. It can be exceedingly useful—in fact, it is indispensable—but it can also be dangerous and damaging by giving the student obsessions which bar his mind from an understanding of objective reality. At its best, economic theory consists of straight thinking with regard to the relations of the facts and concepts made available in the study of economic geography and economic history, in which studies the statistical, the accounting, and the experimental methods are used in organizing the factual material. The student with a background of economic geography and economic history will argue with the professor of economic theory whenever the theory appears to him to be at variance with the facts of everyday life. This should result in an effort to readjust the theory to fit the facts,

and may lead to original thinking. Thus disciplined, the student will not accept economic theory as final truth, but rather as a tentative formulation of what in the present light appears to be a true and useful generalization. The student's faith will then be in the clear visualization of the facts and forces of everyday life and the understanding of their relations. It is worth stressing that the place for the major work in economic theory is in the formulation of the hypotheses or primary generalizations in order to make sure they conform to the facts. This, of course, implies a thorough knowledge of statistical, accounting, and experimental, as well as all other methods of economic research. With this work of formulating hypotheses well done, the drawing of logical conclusions is relatively easy.

The study of the fundamental institutions which provide the framework of our social-economic order is an indispensable part of the training of the economist. It is important to understand the real significance of property, public and private; to understand contract in its economic relations; to understand the significance of corporations, labor unions, and other private agencies which participate in the control of economic activity. It is important to know the ways in which the present institutions, public and private, control the distribution of income and to know in what measure these controls are in harmony with the best interests of all the people. And then it is important to realize that since these are human institutions created or permitted by the state, they may be modified by the state in the interest of the people.

A knowledge of the institutional as well as the natural basis of the contrast between agriculture and other occupations with regard to the ability to control production and maintain prices is essential to an understanding of the economic problems of the farmer. It is through the modification of public and private economic institutions, as well as through intelligent individual and group adjustments, that the inter-occupational exchange of goods and services can be put on an equitable basis. To secure changes in these institutions, whether public or private, legislative action is generally required. The farm economist has been more successful in educating the farmers than in influencing the legislators. In seeking ways and means of making his findings effective, the agricultural economist may to advantage study the history of specific legislation, the ways in which other groups bring influence to bear

and the ways in which the legislators respond. Much of the economic philosophy held by politicians and reenforced by pressure groups is faulty. A thorough understanding of this economic philosophy in its historical setting is essential if one is to be in a position to dislodge obsolete and unsocial ideas and to promote sound thinking leading to the institutional changes essential to the general welfare and to the welfare of the farmer. There is need for economic statesmen with the knowledge and the courage to lead the way toward legitimate modifications of economic institutions in the interest of the general welfare. The training of men for agricultural statesmanship may prove to be quite as important as the training of men for the work in research, teaching, extension, and private and public administration.

RECEIVED FEBRUARY 21, 1940

TRAINING AND RECRUITMENT OF AGRICULTURAL ECONOMIC PERSONNEL: II. THE CIVIL SERVANT

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ONE of the most encouraging things about recruitment and training is that the experts are realizing the lack of any definite program and are trying to do something about it as rapidly as possible, even though they are becomingly modest about any scientific standards.[1] I am not an expert in this field and can only offer a few observations and general suggestions which occur to me after about a dozen years in the Government service, during which I have been hired a few times and have hired and supervised a few other people.

First, I hope the editor will let me waste a little space to wish we could find a better word than "recruitment." Rightly or wrongly the word always suggests to me the posters, pep talks, brass bands, and parades which are used to induce young men to join the army. We need an entirely different program for hiring agricultural economists. There should be two main parts to such a program.

1. The various kinds of work in the field should be described as completely and as honestly as possible so that a young man can apply for the kind of work for which he is best suited. Young college graduates usually do not realize the wide variety of work in the Government, and are inclined to make many unwarranted generalizations. My own experience has been with research on matters of agricultural policy—particularly in the field of marketing. I can truthfully report that in this kind of work I have never been greatly bothered with routine and red tape; have had as much academic freedom as I would expect in most places; and have had plenty of chance for personal recognition. These observations might not be so true of some other kinds of Government work.

2. Some better way needs to be found to put applicants on the registers for which they are best qualified and to rank them in order of their ability. This is not easy to do. My only specific suggestion is that greater weight should be given to personal inter-

[1] Roy F. Hendrickson, New developments in personnel selection, training and advancement in the Federal service. This JOURNAL, March, 1940.

views and to recommendations from competent economists, and less weight should be given to such routine matters as the number of years' experience in a given field. It should be recognized that one year's experience in certain kinds of work and at certain institutions may be more valuable than five years' experience in other accepted kinds of work at other accepted institutions.

After locating a position in the Government, a junior or assistant will need a good deal of training. There has never been any very systematic training program, but in Washington at least, an enterprising youngster with initiative has plenty of chance to take graduate work at night and to attend many informal seminars. The large number of agricultural economists located in Washington makes it easy to get together many groups with mutual interests. Some of the younger statistical clerks, for example, have been holding a series of extracurricular seminars this year in addition to taking regular courses.

Doubtless there is a need for some more formal training. Some way should be found to give juniors and assistants a better understanding of the work of the whole Division, Bureau, and Department for which they work. On a divisional level this is done fairly well in some cases by frequent staff meetings, but the young economist does not always have a chance to learn much about things going on outside his particular division.

Also, we need to work out some definite plan of placement to make sure that each young economist finds the kind of work for which he is best suited. Juniors and assistants are likely to start by taking any job in the Department which happens to be available. There is a natural tendency for them to stay in the same division on the same type of work rather indefinitely. Probably the remedy is for Division heads to make a full and detailed report on each new economist about six months after appointment, and for the economist also to make a similar report on himself. These reports should show in detail aptitudes, abilities, and preferences for various kinds of work. Such reports carefully summarized and made available to all Division heads would not only be useful in placing young economists in positions for which they are suited, but would improve the work of the Department.

The older economists in the higher grades also need a training program. Some of us, particularly in the older Bureaus, have to guard against becoming ossified. The best remedy for this is prob-

ably change of almost any kind. We ought not to be left too long on the same job. It is a good thing to have occasional reorganizations which involve both changes in our programs of work and changes in personnel. Probably we need more. Most of us ought to take an occasional Sabbatical year, even though the Government does not provide one with pay. Next to that, perhaps the best and most practicable policy would be some kind of exchange relationship with colleges under which a few of us would teach or do research in the colleges each year and our places would be filled temporarily by the college man whose duties we took over.

RECEIVED FEBRUARY 22, 1940

TRAINING AND RECRUITMENT OF AGRICULTURAL ECONOMIC PERSONNEL: III. THE SOUTH

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EXPANSION in agricultural economics in the South depends upon the development of training centers which will have greater influence upon public education and action. Such advancement is possible only by providing opportunities for obtaining and retaining a strong nucleus of excellent faculty and graduate students. Only a strong center will attract students of outstanding qualities and interest them in choosing agricultural economics for their life work. Students will not be willing to serve the necessary apprenticeship needed in the prolonged period of training unless reasonable certainty of recognition can be expected. Only by having good students available as a potential resource for faculty replacement and extension can this field of endeavor permeate inactive areas.

Contention that the southern region lacks human resources for such development is of no weight. Ample material is available but lacks adequate preparation. Much of the personnel that has been drawn into the field is inadequately trained. More often the best persons have never been attracted to this field of study.

Our present problem is largely one of getting momentum started in the direction of improvement. This means discovering students of excellent ability within the region and encouraging them to choose the field of agricultural economics. Likewise, when students from the South have met the selective competition from other areas and have been appointed to the graduate group, they have found it necessary to obtain their formal training at institutions outside the area. Studies have shown how this mitigates against getting them to return to the region.[1]

Clearly this selective process is one in which only the less promising graduate students tend to be retained for advanced training at southern institutions. Furthermore, students ranked relatively low in their quality of training elsewhere will probably be the individuals taken back into the South as additions to the faculties of

[1] Wilson Gee, Research barriers in the South, ch. III.

educational institutions. The real problem upon which the region needs to focus its attention now is how to redirect this process in order to attract excellent students into this field of work and to recruit a faculty for institutional service from the best students available.

In taking the first step in such a process, it is practically mandatory that a faculty be obtained from personnel whose environment has been much different from that characteristic of the cotton area. This step is essential because the region offers a limited supply of persons of the first rank who have the necessary training and experience.

In initiating such a development, strong opposition may be expected from both students and administrative officers who find this new segment of their faculty attempting, through rigorous action, to reverse the natural drift toward a weaker position. Unless competition can be on the level of obtaining the best faculty and students, any attempt at strengthening the work will be greatly jeopardized. It will involve showing greater preference for those members of the faculty who advance the level of competence and training and restriction of the use of resources for others less competent. When extended to the selection of students for subsequent gradute work, it will mean increasing rigorously the standard of acceptance in the face of an increasing demand for admittance to the field. At the undergraduate level it will require a testing in a manner that will give some objective means of selecting those students who possess great potentialities and of attracting students who have excellent human qualities and wish to compete where recognition is given to their abilities.

Obtaining the initial faculty demands strong support from higher administrative officials, for they must select men on a merit basis in order to initiate improvement. Within the region numerous instances may be found where this support would be a radical departure in administrative procedure because of a strong feeling for the superiority and intellect of local persons—a form of "state nepotism." That such a procedure has never been shown to have any appreciable validity is perhaps an indication of one form of complacency that has to be overcome. The addition of new faculty members or graduate students finds much of this provincialism prevailing in the southern states.

This narrowness of point of view frequently permeates the whole

administrative activity. In the field of agricultural economics there is need for much improvement in the professional evaluation of prospective graduate students. The differentiation between students who should go on in graduate study and those who should be directed otherwise is difficult to make, particularly when many students are graduating. Also, graduates from fields other than agricultural economics may possess more attractive records and should be selected under competitive conditions. Clearly there is an increasing need for objective measures which will be helpful in selecting students for higher service through prolonged training. A strong faculty will aid in locating and directing a placement of students rather than in pushing them into advanced training merely to get them off their hands. Since resources are greatly limited in the South, the need for getting the best students into training is a vital one.

The development of an atmosphere of clear thinking, sound research, and appreciation of the academic development in any one field depends greatly on associated fields. Neither a group of individuals nor a department can move far ahead of other individuals or departments without creating a definite academic stress within an institution. Students need constant exposure both to high endeavor in all phases of training and to the professional satisfaction which such attainment brings. Only out of such a community of interests can adequately trained men be drawn—men who will push out the frontiers of knowledge, who will build more strongly the fundamental principles on which a department must stand, and who can increase the momentum of public education once it is started.

RECEIVED MARCH 2, 1940

AGRICULTURAL LABOR AND THE FAIR LABOR STANDARDS ACT OF 1938

H. W. Hannah
University of Illinois

THE Fair Labor Standards Act of June 25, 1938,[1] establishing maximum hours of work and minimum wages for employees in industry, exempts employees in agriculture from these two provisions. Agriculture is defined in the Act as follows: "Agriculture includes farming in all its branches and among other things includes the cultivation and tillage of the soil, dairying, the production, cultivation, growing, and harvesting of any agricultural or horticultural commodities (including commodities defined as agricultural commodities in the Agricultural Marketing Act of June 15, 1929, as amended),[2] the raising of livestock, bees, fur-bearing animals, or poultry, and any practices (including any forestry or lumbering operations) performed by a farmer or on a farm as an incident to or in conjunction with such farming operations, including preparation for market, delivery to storage or to market or to carriers for transportation to market."

In addition, Sections 7(b) (3) and 7(c) exempt certain seasonal occupations from maximum hours provisions, and Section 13(a) (10) exempts from both wage and hour provisions labor performed in processing certain agricultural products, when the work is done in the area of production.

The definition cited in the foregoing paragraph is substantially the same as that given by many encyclopedias and dictionaries of law. Through the years it has been enlarged by the addition of more enterprises to the "among other things" clause, and in the present instance has been still further enlarged by the last clause on preparation for market and delivery to storage, carriers, or market.

Several farm organizations have objected to this definition on the ground that it has been and will in the future be interpreted too narrowly and will thus exclude some occupations that are essen-

[1] 52 Stat. 1060.

[2] In the Marketing Act "agricultural commodity" is defined as " . . . including, in addition to other agricultural commodities, crude gum (oleoresin) from a living tree, and the following products as processed by the original producer of the crude gum (oleoresin) from which derived: gum, spirits of turpentine, and gum resin. . . . "

tially agricultural. The case most in point is that involving the employment of labor in farmers' cooperatives. Recently the National Labor Relations Board ruled that employees hired by a farmers' cooperative organization to spray trees and pick, wash, grade, and pack fruit were in effect industrial workers. This viewpoint was upheld by the United States Circuit Court of Appeals in San Francisco, the court saying in effect that, "When the product of the soil leaves the farm, as such, and enters a factory for processing and marketing, it has entered the status of industry." This raises squarely some questions to which sound and unbiased thought should be applied. Conceding that the purpose of the Wagner Act is to better conditions for laboring people, what grounds may honestly be urged for excluding an enterprise from its operation? To what extent should the peculiar nature or demands of the employer's business excuse him from the provisions of the Act with respect to the people employed by him? Since the line of demarcation between agriculture and industry is, has, and always will be indistinct, should not primary consideration be given to actual benefits which may accrue to labor and agriculture by excluding or including a particular kind of labor, rather than to an attempted and perhaps impossible definition of particular business enterprises? The decisions of the NLRB and Circuit Court of Appeals just cited illustrate the fact that no matter what definition is set up for agriculture, there will always be an indefinable area between agriculture and industry—obviously the courts would not give credence to a definition of agriculture including all of industry. With these thoughts in mind, a brief review will be presented of what legislators and judges have said in attempting to define agriculture.

Legislation and Court Decisions

Many state and federal laws have defined "agriculture" or "agricultural" and many cases involving these definitions have come before the courts. In this mass of interpretation there is discernible a variation in definition, depending upon the purpose of the legislation.

State Workmen's Compensation Acts

Statutes providing for employers' liability and workmen's compensation for accidents have practically all excluded "farm labor" or "agricultural labor" from their provisions. State courts have

frequently been called upon to interpret the meaning of farm labor, agricultural labor, or agriculture, and a variety of opinion exists. In 1936, the Supreme Court of North Dakota held[3] that one who did commercial or custom combining of grain was "engaged in agriculture" within the meaning of the State Act. The following statements by the court are significant:

"One may be employed in agriculture and yet not be a 'farmer' in the ordinary sense of the term, nor even a 'farm laborer' as the term is used in our lien laws. They are not synonomous terms. The term 'agriculture' is broader than either of the others.

"The fact that the farmer may thresh for a neighbor or engage in what is called 'commercial threshing' does not alter the work his employees are doing. They are harvesting crops even if doing it under special contract. Hence that the thresher in that case was what is known as a 'commercial thresher,' or one doing the threshing under an independent contract is immaterial, all are employed in the business, profession, or pursuit known as agriculture, and the policy of the law is to exclude such from the benefits of the law.

" . . . it must be clear that the man who plows a field and sows a crop is engaged in agriculture whether he does it for himself, or as an employee of the owner, or on an independent contract.

" . . . one may be employed in agriculture, and yet not be a 'farm laborer' . . . "

The court distinguishes between statutes excluding "agricultural labor" and those excluding "farm laborers," saying that the former is much broader and excludes more occupations than does the latter. The Fair Labor Standards Act employs the broader definition.

In Keeney v. Beasman,[4] the Maryland Court of Appeals tried to rationalize on the problem of when dairy farming becomes dairy industry, and at what stage the labor of an employee should cease to be called an "agricultural service" within the meaning of the Act. In an earlier case involving a claim by a laborer on a dairy farm, the court had said:

"It may be that there are dairying operations now carried on upon such a scale, or under such circumstances, that they could not properly be classified as agricultural, but it is true that dairying

[3] Lowe v. North Dakota Workmen's Compensation Bureau. 66 N.D. 246, 264 N.W. 837, 107 A.L.R. 973.

[4] 169 Md. 582, 182 A. 566, 103 A.L.R. 1515 (1936).

operations are still carried on by many farmers as parts of general agricultural occupations." In the present case the court evaded its former generalization by saying, "What the court had in mind in making that statement was obviously the distinction between the production and sale of milk yielded by cattle maintained on the farm as a part of its operation and the business of buying and selling milk, or of manufacturing and selling milk products apart from, and independent of, any farm, for obviously in the latter case the work not having any connection with a farm would not be agricultural in its nature . . . "

The test which the court seems to be trying to apply is whether or not the occupation has such a connection with agriculture that labor performed within the occupation can be classed as agricultural labor. Under this test the nature of the work performed by a particular individual is relatively unimportant.

A somewhat different approach was used by the Supreme Court of Michigan in Shafer v. Parke, Davis and Company.[5] In this case the defendant company maintained a farm on which it kept animals for the production of serum. The plaintiff, employed for general work on the farm, was kicked and injured by a horse. The Industrial Accident Board allowed compensation under the State Act excluding farm laborers, on the theory that the plaintiff was not a farm laborer. This ruling was reversed by the Supreme Court, which said:

"The statute does not classify the employee by the ordinary business of his employer, but by the kind of work he, himself, is employed to do. . . . Any attempt to classify the employee through a consideration of the uses for which the produce of the farm is designed would lead to endless confusion." The court said further, that general acceptance of the Act for other employees could not be construed as an election by the company to bring farm laborers under the Act.

In this case the court stressed the work of the individual, rather than the occupation of the employer. In saying this the fact must not be overlooked that an employer may engage in several occupations which may or may not be distinct from each other. In this case the farm was maintained for the manufacture of serum. One wonders if the decision would have been different had the

[5] 192 Mich. 577, 159 N.W. 304 (1916).

laborer looked after monkeys kept in cages rather than horses kept in stalls. Attendants at zoos do work in the nature of agricultural labor, yet they are not called agricultural laborers, because the animals are kept for a purpose other than farming. It would seem that so long as an attempt must be made to define agricultural labor, the nature, scope, and purpose of the enterprise in which it is engaged must be taken into account. The question may be fairly raised, however, as to whether it is profitable to define agricultural labor at all if it includes diverse kinds of work, and if the definition is merely an economic concession to agriculture rather than a justifiable distinction in the kinds of labor that need the benefits of the Act.

Other Types of Legislation Calling for a Definition of Agriculture

Many types of state labor legislation exist from which agricultural labor has been excluded. Common examples are unemployment compensation acts, health and safety acts, and state laws defining a legal day's work.

In interpreting a Pennsylvania statute allowing "products of the farm" to be sold from public stalls, the court held that the prohibition of the sale of meat in certain parts of the market applied to everyone—farmers included.[6] The court said: "The ox is the produce of the farm; beef is the produce of the slaughter house. It is manufactured by the professional skill of an artisan whose business is distinct from that of a farmer. That the farmer sometimes works up his own raw material, cannot prevent it from taking a new denomination from the additional labour expended on it.

"When the farmer slaughters his own beef the product is not the less the product of the slaughter house."

The court finally held that the phrase, "produce of the farm," does not include beef—in other words, beef was held to be a manufactured product.

Regardless of the justice of the decision in this case, the court at least recognized, and rightly so, that one person, firm or corporation may be engaged in more than one distinct business.

In 1924 an interesting case arose in Washington under the Commission Merchants Regulation Act of that state.[7] (Laws 1923, p. 366.) Among other things it provided that:

[6] The Mayor of Philadelphia v. Davis, 6 Watts and Sergeant (Pa.) 269 (1843).
[7] Northern Cedar Company v. French, 131 Wash. 394, 230 P. 837 (1924).

Section 1. "The term 'agricultural product' whenever used in this Act shall include any horticultural, viticultural, forestry, dairy, livestock, poultry, bee or farm product; the term commission merchant . . . shall include every person, firm, etc. . . . who receives any agricultural product to be sold on commission, . . . but shall not include non-profit cooperative marketing organizations."

The Act was attacked, two arguments being that it was discriminatory in excepting non-profit cooperative marketing associations, and that the products designated as "agricultural products" were not of a natural selection.

The court refuted both these arguments, saying: "There unquestionably exists a distinction between the ordinary commission merchant and the . . . cooperative" (farmers' non-profit). It (the cooperative) is nothing more nor less than a man doing his own marketing." Arguments that fishing had just as well have been included and forestry excluded were refuted: "An act which justly regulates certain things is not unlawful because it fails to regulate other things, even of a similar nature. . . . The question . . . is whether a forest product is an agricultural product within the meaning of the act. We think it is. . . . This provision should be liberally construed. . . . "

In this case the court introduces the interesting concept that cooperative endeavor in selling farm products is "nothing more nor less than a man doing his own marketing." Obviously, there are innumerable arguments on both sides of such a proposition. Regardless of which side labor legislation chooses to support, the real question still remains "How is labor affected?" The fact that a particular enterprise may be considered as "farmers doing their own marketing" does not mean that industrial conditions may not exist with respect to the labor employed. So far as the Supreme Court of the United States is concerned, it has clearly indicated that it is concerned with the substance rather than the theory of farmers' cooperative marketing organizations.[8]

The courts have defined agriculture as used in a variety of other acts, including license laws and ordinances, homestead exemption laws, debtors examption laws, and statutes concerning the annexa-

[8] In United States v. Borden Co. 60 S. Ct. 182 (1939) Justice Hughes said "The right of these agricultural producers thus to unite in preparing for market and marketing their products, and to make the contracts which are necessary for that collaboration, cannot be deemed to authorize any combination or conspiracy with other persons in restraint of trade that these producers may see fit to devise."

tion of agricultural lands, drainage, agricultural products, bankruptcy, and tariff.

In summarizing the position of the courts with respect to their definitions of agriculture, the following generalizations may be made:

1. When the act or occupation in question is traditionally agricultural, that is completely divorced from marketing or processing or any other activity not carried on by an individual farmer on a farm in the usual course of the farm business, the courts have no difficulty in applying "agricultural" to the disputed matter, regardless of any policy which may be involved.

2. As acts or occupations depart from farming in its simplest terms, the courts look more and more toward the purpose of the legislation in question to see how agriculture should be defined.

3. Courts purport to use some tests. Actually, many of the tests are justifications for a desired result and fall completely down when the facts are changed.

4. No single definition of agriculture has been formulated which will give either desirable or consistent results in a substantial percentage of factual situations. Serious doubt exists as to whether such a definition can be formulated. The number of amendments that have been offered to the present definition in the Fair Labor Standards Act is some evidence that this is true.

Considerations and Conclusions

Agriculture has been excluded from the provisions of this Act presumably on the theory that because of certain relationships existing between the employer and employee in agriculture, because of the nature of the work and because of other inherent factors, the Act should not apply. From this it is logical and equitable to assume that since certain principles had to be enunciated in order that the exclusion of agriculture could be justified, these same principles should be used to determine whether a laborer in a particular business, agricultural or otherwise, should be excluded from the Act. If this is sound, all attempts to define agriculture should be abandoned as being of secondary importance to establishing the principles actually involved.

The Act itself states that " . . . Congress hereby finds that the existence in industries engaged in commerce or in the production of goods for commerce, of labor conditions detrimental to the main-

tenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers . . . " causes certain undesirable conditions. " . . . It is hereby declared to be the policy of this Act through the exercise by Congress of its powers to regulate commerce among the several states, to correct and as rapidly as possible to eliminate the conditions above referred to in such industries, without substantially curtailing employment or earning power."

The first condition is that the industry must be engaged in commerce or in the production of goods for commerce. Initially it is a matter of administrative determination whether or not a particular industry is thus engaged. The answer is obtainable only by a careful study of the business itself, thus precluding any adequate legislative determination of what constitutes interstate commerce.

Assuming that an industry is thus engaged, the second point to be determined is whether labor conditions in the industry are or are not detrimental to the maintenance of the minimum standard of living necessary for the health, efficiency, and general well-being of workers. Here again a question is raised which can be answered only by a careful investigation of each industry and by an adequate knowledge of what constitutes such a standard of living. Congress has tried to help some by saying that as a matter of law it will be presumed that an acceptable standard does not exist unless the workers receive forty cents an hour and work not more than forty hours a week. This is an exceedingly rough measure to use for the variety of conditions under which men labor. Presumably it represents a compromise between more complete equity on the one hand and simplicity on the other.

Congress further recognizes that it would be inequitable to apply the rule to every employment and has accordingly made certain exemptions in the law. These exemptions are provided for, not by the enumeration of principles or guides which the administrator could use to rule on questionable matters, but by naming specific occupations, thus leaving for the determination of the administrator the rather superficial question of whether a particular calling is fishing, farming, or what not, when the determination of such a question does not settle the real issue of whether the occupation should be included.

From the standpoint of political theory it is proper for legislators to settle matters of policy and give administrators simple direct

rules to apply; from the standpoint of legislative worth-whileness it is important that legislators settle real issues and not apparent ones.

If certain guides could be established, based on social and economic considerations, and stressing the nature of labor rather than the nature of business enterprises, a more equitable result could be obtained for agriculture and other industries. For example, some State Workmen's Compensation Acts declare that the use of sharp edged cutting tools is a hazardous occupation and that the act applies to any employer in the conduct of whose business such tools are used. No attempt is made to generalize on industries using or not using sharp edged cutting tools. It may be that in the application of such guides, all the labor employed in particular enterprises would be excluded from the act. If such is the case, then the enterprise is justly excluded as a matter of course and not by legislative designation. If there is a real reason why a farm hand should not come under the act and no good reason why an employee in a farmers' cooperative canning company should not come under the act, the law should incorporate these basic reasons as tests for the administrator to apply.

Although it may be argued that with respect to exemptions practical necessity demands a broad industrial classification, it may also be argued that practical justice demands definitions which will not deny to large groups the benefits of the law.

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A DESIRABLE FOREIGN TRADE POLICY FOR AMERICAN AGRICULTURE*

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"AMERICA must choose," said Secretary Wallace in one of his most widely read speeches, well-nigh complete economic isolation, virtually complete free trade, or a planned middle course. If this were literally true, the discussion of the present topic would take a different turn. In fact, however, there is no prospect that America will choose either extreme; and if there were a single planned middle course, it would already be definitely set forth if not chosen. Actually, between the two extremes the number of possible middle courses is legion. The practical questions are: What degree of freedom of choice do we have? Which of the middle courses shall we choose? With what rational or irrational bases? With how much or how little planning? Shall the drift be, on the whole, in the direction of more and more isolation, or in the direction of enlarged and increasing freedom of trade? Why is this central decision important for our farmers? And what are the criteria of desirability from the standpoint of American agriculture?

On these last questions there is probably little disagreement among agricultural economists. Our irreducible problems of agricultural adjustment have been magnified by the contraction of foreign outlets for our farm products, which we may yet regard as potentially reversible in some degree, as well as by the practically irreversible contraction of domestic outlets for some of them. The contraction of foreign markets is variously charged to war—the World War of 1914–18, the fear of its recurrence, the great war that is now in progress—to the world-wide great depression of the 1930's, to technological progress, to self-sufficiency measures and multifarious import restrictions in foreign countries, to tariff and agricultural policies within our own country. Whatever the cause, the fact of contraction is too obvious to require elaboration.

Moreover, competent students see no *satisfactory* way of readjusting our agricultural economy to the contracted and perhaps contracting export markets. Certainly the task of agricultural ad-

* Adapted from an address on this assigned topic, at the Bureau of Agricultural Economics, October 19, 1939. It has not been converted into an adequate, comprehensive treatment of the topic.

justment will be far less complex, much more manageable, if substantial outlets for what are loosely called our "farm surpluses" —which Nature makes to vary from year to year—are readily available, and if the nations evince a larger willingness to devote abundant productive powers to satisfying the world's vast needs and unessential wants instead of restricting production, distorting it, or devoting it to destruction. Whatever may or may not seen feasible, the desirable foreign trade policy for agriculture is one that, among other things, opens consumption channels, abroad and at home, and promotes increasing satisfaction of needs and wants.

The elements of such a policy lie largely outside the field of agricultural economics, in part outside economics. They lie in the field of far-visioned statecraft, "social engineering." We may have no obvious opportunity to determine or even influence the decisions. Yet the decisions, individually and in the large, will have a profound influence on the detailed planning of the reorganized Bureau of Agricultural Economics; and it is quite possible that the bureau's research, planning, education, and action may have more influence on the outcome than its staff yet appreciates.

Foremost among the elements of a desirable foreign trade policy is *peace*—not peace right away, peace at any price, a peace that is no peace; but real and durable peace, such that the world may have reasonable confidence in its continuance. This is not the kind of peace we had these past 21 years. Instead we had a brief period of reconstruction, rising insecurity, latterly accelerating rearmament, recurring crises. For a year and a half before September 1939, indeed, we were already "in the second world war," to quote a speaker at Chatham House in London last June.[1] This war was at first conducted "by threats, by propaganda, by armaments, by alliances," until at last organized resistance burst it into open hostilities which for months were so restricted that some foolishly dubbed it a "phony war."

Of the immediate issues I forbear to speak, beyond expressing a personal conviction that the importance of assuring a genuine, lasting peace even overshadows the importance of keeping the United States out of war. The deeper issue is: What can be done to bring and securely maintain the kind of peace that most of the

[1] R. N. Coudenhove-Kalergi, Europe to-morrow. International Affairs, September–October 1939, 18: 625.

world sincerely craves and desperately needs? A world power of major importance, we must seek peace and pursue it, make apparent sacrifices to insure it, for the sake of the larger gains that it will bring us and the rest of the world. Pacifistic as we are, our pacifism should be intelligently active, not unintelligently passive. This involves more than just keeping out of war; it involves finding what we can contribute toward removing or reducing the frictions that make for war, and toward oiling the machinery of peaceful intercourse.

In the early stages of another great war, the duration and outcome of which none can foresee, we need to concern ourselves with the conditions on which the world may go forward with fresh confidence when hostilities end. Most of us do not share the cynical pessimism of those who assert that a victory of the "democracies" would be almost as great a tragedy as a victory of the "totalitarian" powers. The opening months of the war have clearly revealed that many lessons of the war of 1914–18 have been well learned. Is it too much to expect, as well as hope, that many of the lessons of the so-called peace that followed it have been or can be learned also? Spared active participation in warfare, we may well devote some of our energies not merely to adapting our policies and economy to a period of warfare, or to the problems that our possible direct involvement might bring on us, but to the problem of getting a better kind of peace and insuring its continuation.

The alternative of failure makes even a cold-blooded economist shudder. If aggressive diplomacy backed by armed might wins its way in Europe, we shall presumably pay a fearful price to arm as never before. If the present war ends otherwise, only to be followed by an interim half peace and then a third terrible conflict in another 20 years or so, this country cannot expect to go unscathed. We cannot hope to fulfil the dream of some of our isolationists that we stand proudly secure and prosperous almost alone in a world racked by war devastations, war fears, and war preparations.

Parenthetically, let me say that the time is more than ripe for study of the weaknesses in our governmental structure and functioning that have seriously lessened our ability to play a part in world affairs commensurate with our economic strength, our comparative unity and remoteness from Europe and the Orient, and our own national interests. Our political scientists have perhaps

devoted relatively too much attention to current events, and too little to providing the basis, in men and ideas, for the modernization of our government to enable it to discharge present-day tasks. Students and reformers in the field of public administration have scratched the surface, but structural and functional reconstruction is called for.

Specifically, it strikes one as shamefully foolish that, while we lavish funds on our War and Navy Departments, our Departments of Agriculture, Commerce, and the Interior, the State Department is starved into falling down on its job of being a Department of Peace. Its functions as a research, planning, and action agency, its personnel for these purposes, might well be materially expanded; and upon their progressive success the planning and action agencies in other departments must heavily depend. It is even conceivable that an appropriate bureau built up in the State Department, broadly comparable to the Bureau of Agricultural Economics, might do even more for American agriculture than the latter bureau can. We can well afford to spend in such ways the cost of a battleship a year.

Among the elements of reorientation that awaits our evolving thought and action is an answer to the cry for "room to live"—"Lebensraum," "espace vital"—that comes from Germany, from Italy, from Japan. It is partly a propaganda cry, based on fiction rather than fact. Yet it easily takes hold on poor, ambitious peoples in lands densely populated; and fictions, when commonly believed, are potent forces in world affairs. The United States is a fair target, eventually if not yet. Here we sit, a mere 130 million in a huge area richly endowed with natural resources enterprisingly exploited. We restrict our own population. We keep out most of those who want to come in, and, by tariffs or quotas on their goods, by subsidized competition with their services, we limit their ability to buy from us. Can we do so indefinitely, even with safety?

Given liberal trade with areas outside, the inhabitants of a city do not concern themselves over the facts that their acreage per capita is measured in square feet, that they cannot feed themselves from their own fields and gardens. Given secure and effective freedom to trade, the inhabitants of Belgium, Britain, Italy, Germany, and Japan do not need to worry over the fact that they must rely on the outside world for a high percentage of their foodstuffs and raw materials. With outlets here for their goods, with markets for

more of their services, we can offer the crowded populations of other nations an opportunity to make better livings while they remain far more densely populated than the United States. We can; but do we?

The end of the present war may conceivably afford a more favorable opportunity than any since one was lost in 1919–21, for reorientation of foreign trade policy on more liberal lines. The autarchy that has undergone such extensive growth in the past decade was only partly a desperate attempt to cope with depression or some of its impacts; it was partly an expression of the fear of war and a form of preparing for war. The terrific storm may clear the air, and render possible a fresh start on a more promising road.

I do not predict this outcome. I know that there are careful observers who regard the movement toward increasing self-sufficiency as an irreversible trend and not a tide that ebbs as well as flows, and who expect (whatever their hopes or fears) that whoever wins the present war it will be followed by increased regimentation rather than decontrol. Clearly, however, this is not assured; and if we prematurely accept this prediction, we shall be helping to make it come true. It is not yet an irrational assumption that the end of the war may at least provide an opportunity for liberalizing trade policy. It is on this assumption that I proceed, leaving to others the task of suggesting a desirable foreign trade policy for American agriculture on assumptions quite different.

We may well prepare to make fresh strides of major proportions in reducing the barriers to international trade if and when such opportunity comes. The reciprocal trade agreements program represented a significant turn in the right direction. It is to the credit of its leaders that it has won a large measure of the country's support, in spite of its vulnerability to petty political attacks. But it has gone a painfully short distance, and tangible gains from it are largely obscured in the dust of other developments.

Our people have not fully awakened to our obligation to buy from abroad if we would sell abroad. Our coffers bulge with gold and silver. Over huge hoards of both we stand miserly guard. We need less of both, not more. Our immigration-restriction policy—probably carried much too far—has all but dried up the remittances that formerly furnished foreign nations substantial quantities of the wherewithal to buy from us. We have built (and are building, perhaps necessarily now) ships at high cost to carry our goods at

even higher cost, and so tending to deprive shipping nations of the opportunity to render service to us for which we can abundantly pay in goods. Our travel abroad, now seriously cut down, will doubtless revive, but it is almost the only sizable item in our international balance of payments that supplements our limited imports to create foreign purchasing power for our exports. Whatever restrictions Congress may impose or the Executive enforce, our creditor position is likely to be stronger rather than weaker when the war ends, unless fresh defaults be added to old ones.

In the interests of industry and agriculture alike, it is imperative that we press on with the solution of two major problems: What goods and services can foreign nations sell that we want and can use? And how can we open the doors to their purchase here? This is a matter not of generosity, but of self-interest contributing to durable peace and international gains.

It has long been popular in agrarian circles to argue that American agriculture as a whole is the passive victim, and industry as a whole the active beneficiary, of our well-nigh persistent high protectionism. Competent students of the subject are well aware that this is not true. There are manufacturing industries as well as branches of agriculture that are handicapped by our tariffs; there are branches of agriculture as well as of industry that are given "effective protection"—witness wool and mohair, flaxseed, sugar, butter, cattle and meat, fats and oils, fruits and nuts. There are numerous instances, in both industry and agriculture, in which tariff "beneficiaries" get apparent benefits but fail to attain a prosperity level comparable with that of non-beneficiaries. There are industrial tariffs, as well as agricultural ones, that have little or no effect except in special periods or in limited regions, as with wheat and cotton.

The actual distribution of burdens and benefits from the tariff is seriously obscured. My own impression is that the benefits are small, and that its chief effects are to bring about and maintain a different distribution of our occupational and capital forces than would otherwise prevail, and a lower level of national productivity and consuming power. The broad gains to agriculture as a whole which substantial enlargement of our imports would presumably bring would, in my heretical opinion, entirely justify our accepting more agricultural imports of types that are now kept to small dimensions by high duties.

It is especially important to American agriculture that really large import openings be made, if radical permanent contraction of our farm plant and personnel are to be prevented. Here I warmly second the position expressed by Secretary Wallace.

One reason needs to be stressed. For the most part, our agricultural exports nowadays are exceptionally vulnerable, even in time of peace. In wheat we are weak competitors, for the quality of our export surplus is seldom equal to that of Canada, Argentina, and Australia, and even in the absence of governmental restrictions it tends to be held at too high a price to compete on equal terms with what these and other exporters have to sell. In corn we are at a competitive disadvantage with Argentina because, in peace at least, the economic distance of our surplus corn fields to the seaboard and therefore to overseas markets is far greater, and because our ideas of acceptable prices are high. Our lard is subject to severe competition from tropical and marine fats and oils, particularly since the technological advances of the postwar period. Our cotton is vulnerable to the competition of many foreign producers and to the more insidious competition of substitute fibers. Our tobacco, our fruits and vegetables, are regarded as luxuries or semi-luxuries—most conspicuously in time of war. In general, our representative agricultural exports fail to posses the distinctive combination of exceptional quality and low c.i.f. costs that characterize our automotive equipment, agricultural machinery, cinema films, and other typical industrial exports. To a considerable extent we must expect that foreign nations, even if they sell more to us, will choose to enlarge their purchases of these other things instead of concentrating on our farm products. If we are to export farm products "up hill," the foreign purchasing power for all our export products must be substantially enlarged.

If one asks how to moderate the political convictions that are predominantly adamant against imports of all sorts of specific commodities and services, under Democratic as well as Republican administrations, the answer is not easy; but I am sanguine that one can be found. The economic, political, and publicity talents needed are available, and they have been devoted, with marked success, to less worthy objectives. The stake of American agriculture in finding an effective answer is large enough to warrant devoting considerable energy to that purpose.

There is, however, another important aspect. Even if we had no

tariff or other import barriers, even if a much larger volume of imports created a correspondingly larger foreign purchasing power for our exports, our domestic policies could diminish or even prevent this from opening foreign outlets for farm products that we normally produce. The notable contraction of our cotton exports in several recent years was only partly due to limitations of foreign purchasing power, to barter arrangements of such countries as Germany, and the like. It was due predominantly to our cotton loans and our restrictions on cotton acreage and production. These, in turn, were traceable to unquestionably uneconomic ideas as to cotton prices. If we had not had severe droughts in 1934 and 1936, the same might well have been obvious with corn and wheat. In no small degree it was true with corn in 1938–39: Argentina, our principal export competitor, had two small crops in succession; the world market was short of corn, but our corn loans kept down our exports and raised our carryover to record heights. The lower prices that would have enabled us to keep, by ordinary economic means, a larger share in the world cotton, wheat, and corn markets would have exercised some restraint on acreage and production; but the AAA, the CCC, and the droughts did far more. Our adjustment problems in the Cotton Belt would have been much less serious, our progress in coping with them would have been much greater, if we had let cotton prices go and concentrated on helping the South to make appropriate adjustments to those prices.

The latest official expedient is the export subsidy. Years ago, one of the great farm organizations had as its major remedy for agricultural ills what was then called the export debenture plan, for an export subsidy slightly camouflaged by the term "debenture." It was not adopted; and, on the whole, the ideas as to agricultural policy and as to foreign trade policy in the Roosevelt administration were definitely opposed to it. Yet insidiously, little by little, year by year, the basic adherence to a price-raising, price-supporting policy, the resort to surplus purchases and commodity loans without recourse, and the consequent accumulation of stocks in government hands, have gradually led to increasing use of export subsidies. During 1938–39 this device was employed to "assist" the export sale of 94 million bushels of wheat (including flour as wheat); in this crop year it is again being applied to wheat, with slightly different mechanisms and much more restraint; and for several months in 1939 a substantial subsidy was paid on cotton exports.

In considerable measure, as its backers would readily admit, the export subsidy has been invoked to offset the obstacles to export created by the production restraints and loan programs, and is therefore represented as not constituting a form of unfair international competition. It is premature to attempt to appraise the results of our export subsidies to date. Yet the relevant decisions must be more or less arbitrary, and the judges are not impartial judges; the discretion rests purely with the American government and the agency operating the subsidies in its behalf. There is nothing under present practice to interfere with a choice to regard our economic might as right, with ourselves the sole judge of consequences—closely parallel to the position that Germany has taken in regard to her objectives and procedures in recent years. I doubt if peace can be insured, or the kind of normal international intercourse on which our future heavily depends be promoted, by unilateral economic power pressure any more than by unilateral military power pressure.

To bring about adjustments in the incomes of our farmers to levels that may properly be regarded as reasonable—to raise them to the excessive level of so-called parity is hopeless—other procedures can be used. We do not have to resort to power manipulations of the economic process, such as are involved in export-subsidy and surplus-disposition procedures. Though by no means an enthusiastic advocate of direct subsidies to farmers, I believe that the lesser evil is to let prices go where they will, let trade flow as it will, and somehow meet urgent needs of sellers at exceptionally low prices by some form of subsidy (preferably not on a commodity basis) that will not become so deeply embedded as never to be given up.

To sum up, I believe that some of the most vital elements in our national policy that concern agriculture and its normal rehabilitation lie outside the specific province of the Department of Agriculture, but not outside the sphere of interests of agricultural economists. These include (a) insuring the return and persistence of real peace in the world, (b) materially diminishing trade barriers of all sorts, and (c) removing the brakes on our enterprise and business expansion—not merely in Wall Street, but throughout the length and breadth of this land. A really desirable foreign trade policy is an integral part of all three. The parts of our agricultural policy that are inconsistent with these elements, into which

we have drifted under emergency psychoses, should be modified into harmony with them. We have more to gain in the long run from seeking, even under difficulties, the straight and narrow path of opening the way to freer trade.

One who speaks thus is certain to be regarded, in some quarters, as an incurable old fogy who imagines that the world of twenty-five years ago can and should be brought back.[2] His critics can point to the amazing trend in the direction of management—much of it I would frankly call mismanagement—of the world economy and say: "Here it is. You can't get away from it. The trend will continue. You must find a way of fitting into that trend." So it may be. Yet after considerable study of commodity controls, currency managements, and the like, I do not account this inevitable. From the multifarious schemes some elements have emerged that should be incorporated in our permanent policy. By and large, however, I think we are now harvesting the logical fruits of the trend of the last decade or so, reaping the whirlwind after having unwittingly sown the wind. I frankly despair of coming through to a really sound, durable peace if international intercourse is to be subjected to regimentation by some such type of "management." I doubt the possibility of accomplishing the tasks involved in such a way as to permit harmonious integration in this highly diverse world of ours. Just as at the end of the last war there was a cry for "de-control" and a "return to normalcy," at the end of the present one there may be a similar urge to drop a lot of the crazy devices that have been built up and that have led directly into this catastrophe.

In the long perspective of history it may eventually appear that the last two decades have been a crazy interlude, not pointed the trends that dominated the ensuing century. Trends have a way of turning, and the recent one may be doomed to turn or be subject to turning. We shall do well to look forward to prepare for the possibility of preserving the outstanding virtues of earlier principles of policy, combined in suitable fashion with proved virtues drawn from recent experience.

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[2] We are not, however, among the advocates of restoration of "prewar parities."

AN APPLICATION OF ANALYSIS OF CO-VARIANCE TO PRICE-QUALITY RELATIONSHIPS OF EGGS*

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AGRICULTURAL economists in general have made little use of some statistical devices that are commonly used by biologists in analyzing their studies; some of these methods are powerful tools in the analysis of economic data.

The purpose of this short article is to present the results of applying the analysis of variance and co-variance to data on price-quality relationships of eggs. This method shows not only the relations existing, but gives some measure of the relative importance of the various factors involved. These data were obtained in the preparation of a Master's thesis in Agricultural Economics at the University of Maryland.

The basic data were obtained in 1938 by making twelve monthly inspection trips to 50 retail grocery stores scattered in all sections of the city of Baltimore. At these stores 20 eggs were candled, weighed and graded from each price class offered for sale.

Each display was assigned a quality score based on grade as follows:[1]

U. S. Grade	*Points*	*Possible Score*
A or better	4	80
B	3	60
C	2	40
Cracked or blind checks	1	20
Blood spot, meat spot, stuck yolk, mouldy, or otherwise inedible	−1	−20

In addition, the weight, in terms of ounces per dozen, was included in the quality score because to some extent egg size enters into the actual value to the consumer. It was found that the average weight of all eggs inspected for the year was 23 ounces per dozen, so five points were added or subtracted from the quality score for each ounce the dozen weighed above or below 23 ounces. This in effect

* Grateful acknowledgement is made of invaluable assistance in the statistical interpretation of this paper by Dr. W. B. Kemp, Department of Genetics and Statistics, University of Maryland.

[1] Score worked out with approval of J. M. Gwin of the Poultry Department, University of Maryland. Prices on the New York market served as the basis for the weight assigned to different grades.

granted a premium for large eggs, and imposed a penalty for small ones, regardless of interior quality.

Actual prices charged at each store were used to correspond to the quality score.

Records from six of the 50 stores had to be eliminated because they were incomplete. Two samples, one of high and one of low quality, were taken in each of nine stores, so that a total of 53 displays were used for each month from January to December, inclusive.

The procedure followed, then, was to carry out an analysis of variance for price and for quality, and to relate the two by analysis of co-variance.[2] The remainder of this discussion is devoted to the findings of this method.

In the analysis of variance[3] for price and for quality, highly significant F values were obtained. Prior observations had indicated that price varied greatly in different months and at different stores. The F values indicate this, and, in addition, they indicate that the price variations were greater for different seasons than for different stores. Actually in any season, or month, the prices at different stores varied about a certain average, and although the spread between the highest and lowest prices was not uniform, the relationship was more nearly so than was that for prices in the different months, which were subject to greater relative changes because of current egg production.

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[2] For mechanics of this procedure see Snedecor, George W. Statistical Methods. Chapters 11 and 12.

[3] The following table gives a statistical description of the normal frequency distribution for price and quality as used in this study:

Item	Price Distribution	Quality Distribution
Skewness, g_1	.7622	1.5474
Kurtosis, g_2	−2.7972	13.9413
Standard Error:		
of g_1	.096	.096
of g_2	.193	.193
Value of "t" (standard measure)		
for g_1	7.908	16.118
for g_2	−14.493	72.234
Degrees of Freedom	636	636

The price distribution is asymmetrical with an excess of prices less than the average; it is flat-topped due to the bunching of prices near the mean. This is characteristic of actual conditions; the price of all eggs was low in the summer and the price of cold storage eggs was low during the fall and winter when the price of fresh eggs was high.

Asymmetry was likewise noted in the quality distribution. There was an excess of scores near the mean and far from it as indicated by "g_2." A graphic representation of the distribution showed that it was distinctly bimodal.

TABLE 1. ANALYSIS OF VARIANCE FOR PRICE

Source	Freedom	Sum of Squares (x^2)	s^2
Correction	0	633,846.04	
Total*	606	28,279.96	
Season	11	13,600.11	1,236.37
Store	52	10,144.79	195.00
Residue	543	4,535.06	8.35
$F=\frac{1,236.37}{8.35}=148.03$		For significance of 99 to 1, $F^{**}=2.283$	
$F=\frac{195.00}{8.35}=23.358$		For significance of 99 to 1, $F=1.553$	

* Twenty-nine degrees of freedom were lost because there were 29 missing observations in the displays included. In order to carry out the analysis, substitutions that did not affect the average were made by the Yates method as explained in C. H. Goulden, Statistical methods, p. 155. This reduced total degrees of freedom from 635 to 606.

** "F" values were taken from a table of F values in George W. Snedecor, Statistical methods, pp. 174–178. These, in turn, were taken in part, from R. A. Fisher, Statistical methods for research workers.

It was known that the quality of eggs varied between stores and in different months. Highly significant F values for the effect of season and of store on quality confirmed this statistically and indicated that quality varied more widely among stores than it did for different seasons, the reason being that quality in different stores each month ranged from very low to very high, whereas an average of the high and low quality in all stores each season was not so pronounced in any particular season.

By combining the factors, price and quality, using an analysis of co-variance, more interesting relationships are revealed.

When considering all factors affecting price and quality, and solving for "r," the coefficient of correlation, a value of .2962 was

TABLE 2. ANALYSIS OF VARIANCE FOR QUALITY

Source	Freedom	Sum of Squares (y^2)	s^2
Correction	0	2,452,478.04	
Total	606	159,419.96	
Season	11	14,655.09	1,332.28
Store	52	91,246.96	1,754.75
Residue	543	53,517.91	98.56
$F=\frac{1,332.28}{98.56}=13.517$		For significance of 99–1, $F=2.283$	
$F=\frac{1,754.75}{98.56}=17.804$		For significance of 99–1, $F=1.553$	

obtained. This can be interpreted to mean that at least to some extent high quality was associated with high price and low quality was associated with low prices.

When variations in price and quality due to differences in stores were eliminated, the correlation between price and quality for any one store during all seasons, or for the year, was found to be negative or −.8293. This means that high prices were paid for low quality eggs, and low prices were paid for high quality eggs. This relation was to be expected, because in the spring when eggs were plentiful and of high quality the price was low. In the fall prices rose, and while fresh eggs might have been equally as good as in the spring, many cold storage eggs of lower quality were sold for prices as high or higher than the spring price for fresh eggs. Then, too, many pullet eggs were sold in the fall and their quality score was lowered because of size. If cold storage eggs had been eliminated and only fresh eggs used the negative correlation might have been less, and possibly no correlation would have existed between season and quality. This computation was not made because egg laws do not cause a distinction to be made between fresh and storage eggs in Baltimore, and the data gathered would not permit of the distinction.

TABLE 3. ANALYSIS OF CO-VARIANCE BETWEEN PRICE AND QUALITY

Source	Freedom	Sum of Squares xy	s^2
Correction	0	1,246,793.29	
Total	606	19,885.71	
Season	11	−11,707.40	−1,064.31
Store	52	25,260.71	485.78
Residue	543	6,332.40	11.66

The correlation between price and quality for all stores, with the effect of season held constant, was .8303. That is, for any one month there was a high association between the price paid and the quality of eggs received; to get high quality eggs, the consumer would have to pay a higher price. Such findings do not mean that high quality eggs may not be purchased in some sections of the city for a relatively low price, but such possibilities are rare.

With the effect of both season and store held constant, and all other factors such as location of the store, overhead costs, storage conditions, method of delivery and package held constant, the correlation between price and quality was .4065. By combining the effect of these factors and of store, but with season held constant,

TABLE 4. ANALYSIS OF CO-VARIANCE BETWEEN PRICE AND QUALITY

Source	Freedom	Price x^2	Price and Quality xy	Quality y^2	Correlation Coefficient r_{xy}*	Correcting for Regression of Quality on Price		
						Freedom	y^2 Corrected**	s^2
Total	606	28,279.96	19,885.71	159,419.96	.2962	606	159,024.06	
Season	11	13,600.11	−11,707.40	14,655.09	−.8293 Store Constant	11	73,865.92	6,715.08
Store	52	10,144.79	25,260.71	91,246.96	.8303 Season Constant	52	40,482.92	778.51
Residue	543	4,535.06	6,332.40	53,517.91	.4065 Season and Store Constant	542	44,675.85	82.43
Store and Residue Combined	595	14,679.85	31,593.11	144,764.87	.6853 Season Constant			
Regression						1	395.9	395.9

* By substitution in the formula $r_{xy}=\dfrac{xy}{\sqrt{(x^2)(y^2)}}$

$F=\dfrac{6,715.08}{82.43}=81.464$ For significance of 99–1, F=2.283

$F=\dfrac{778.51}{82.43}=9.444$ For significance of 99–1, F=1.553

** By substitution in the following formula the indicated values of x and y for total, season, store and residue, the corrected y^2 values were found:

$(y-b_x)^2=y^2-2b_{xy}+b^2x^2=$ Corrected value for y^2.

the correlation was increased to .6853. Thus it would seem that there was a definite association between the price the consumer pays for eggs and the quality received in any of these Baltimore stores in a given month.

By solving for the regression of quality on price[4] it was found that a change of 1.396 points in quality resulted in a change of one cent per dozen in the price. In order to get Grade A rather than Grade B eggs, using the above score, one must expect to pay for 12 more quality points or 8.6 cents per dozen more; likewise, Grade B eggs were worth 8.6 cents more than Grade C eggs, and Grade A eggs 17.2 cents a dozen more than Grade C eggs. From the data recorded, it was found that the difference in price per dozen varied from 10 to 25 cents in different months between the lowest and highest prices asked, and averaged 16.5 cents for the year. Usually, but with a few exceptions, these samples would be mostly Grade C and Grade A eggs respectively. This affords a practical test of the accuracy of this method.

By using the same regression of quality on price, corrected y^2 values or new quality values were obtained. In effect, by removing the association of price and quality the importance of season as a factor affecting price was increased over six times, while the effect of store on price was decreased by almost half. This greatly strengthens the significance of F for price and season obtained by the analysis of variance for price. That is, season is much more important than store in determining the price of eggs.

Thus, by removing one degree of freedom for the regression of price on quality, 395.9 points of the total, s^2 values were removed; and since the s^2 value for the residue was only 82.43 compared with 6,715.08 for season and 778.51 for store it seems apparent that differences in seasons and stores accounted for the most important factors affecting price and quality of eggs.

It has been pointed out that most of the relationships found by this method were already suspected, and because of this some might say that this procedure has no value. Its practical importance lies in the emphasis it places on certain factors. It assures the economist which factor is most important and gives him confidence in his work that comes not from blind guessing, but from guided reasoning.

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[4] $b=\frac{xy}{x^2}$ = the slope of the regression line when season and store are held constant.

EXPORT-DUMPING PLANS

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THE lower prices and incomes received by farmers since 1937 have revived interest in a number of "farm relief" plans which have been before the public in one form or another since the beginning of the post-war agricultural depression. The more prominent of these plans, although appearing in dissimilar outward guises which lead to confused notions that they represent different methods of dealing with the problem, are based on essentially the same major principle. To this principle the generic term, "export dumping," may be applied.

In view of the revived interest in proposed measures of this type, an objective analysis of their differences, possibilities and limitations should be helpful at this time. Although the European war has considerably affected the conditions which determine the results of export-dumping, 1940 apparently will be a year in which there will be much public interest in certain proposed measures of this type.

Principle of the "Export-Dumping" Plans

The export-dumping type of price and income raising measures all have a number of important features in common: (1) separation of the domestic and foreign markets with respect to price determination; (2) establishment of a higher effective price in the domestic market, possibly based on some standard such as "parity," "cost of production" or "world price plus the tariff"; (3) limitation of the quantity made available for domestic consumption to that amount which will be consumed at the price established for the domestic market; (4) disposition of the remainder of the total output at whatever price it will bring in world markets.

These features of the export-dumping principle may be observe graphically in figure 1 (the dotted lines are for purposes of a later discussion and should be ignored for the present). In the absence of any dumping operations, the price for the portion of the product entering into domestic consumption and for the portion exported is the same, or 8.0 on the price scale in the diagram. The amount

consumed domestically is 260 units and the amount exported 120 units.[1]

With export dumping in effect, the domestic and export prices are different; the domestic price has been raised from 8.0 to 11.3, the quantity domestically consumed has been reduced from 260 to 220 units, while the quantity remaining for export has been increased from 120 to 160 units. This increase in the quantity exported has reduced the export price from 8.0 to 6.4.

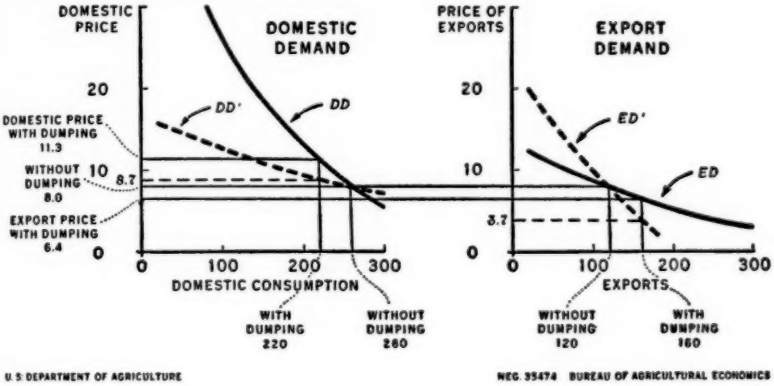

FIG. 1. FEATURES OF EXPORT-DUMPING PRINCIPLE.

Various Methods of "Export Dumping"

It will be evident from the foregoing discussion that the general principle of export dumping can be made effective in various ways, some of which have been incorporated in specific proposals for agricultural legislation.

(1) It would be possible, although difficult, to fix the price of that portion of the commodity moving into domestic consumption. This would automatically limit the proportion of the total available supply going into domestic consumption, leaving a larger quantity for disposal in foreign markets or to be added to stocks. The larger quantity for export could be sold only by reducing the price; for example, in figure 1, if the domestic price were fixed at 11.3, domestic consumption would be automatically reduced from

[1] In order to simplify the discussion, it will be assumed that all of the annual production will be either domestically consumed or exported. It may also be noted that the use of an export-demand curve rather than foreign demand eliminates the need for considering the foreign supply curve. The assumption of a fixed total supply for one year eliminates the need of showing the supply-of-exports curve.

260 to 220 units, leaving 160 instead of 120 units for export, and reducing the price received for exports from 8.0 to 6.4.[2] An example of this type of plan is Senate Bill 570, 76th Congress. (Other examples, 75th Congress: S.2325, 2732; H.R. 271, 1612, 2731, 7475, 8501, 8521, 8522, 8894, 9365, 10721.)

(2) The quantity of the commodity made available for domestic consumption could be fixed. This, in effect, would amount to the same thing as fixing the domestic price. The remainder of the product would go into export channels or stocks, and since exports would be increased the export price would be reduced. Referring again to the diagram, if the quantity made available for domestic consumption were limited to 220 units, the domestic price would automatically rise to 11.3, exports would be increased to 160 units, and the export price reduced to 6.4. One of several proposals for accomplishing the objectives of export dumping in this manner is that for tagging bales of cotton allotted to domestic consumption: 75th Congress, H.R. 8472. (Other examples, 75th Congress: S.4056; H.R. 271, 8472.)

(3) The Government, or some agency financed by the Government, could buy for export a sufficient portion of the total supply to insure sale of the remaining portion of the supply in domestic markets at a higher price than would otherwise have prevailed. Or, subsidies could be paid to exporters, which would accomplish the same thing. Referring to the diagram, the increase in exports resulting from the subsidy, from 120 to 160 units, would reduce the quantity remaining for domestic consumption from 260 to 220 units, thereby raising the domestic price from 8.0 to 11.3. The export price would be reduced to 6.4, and the difference between the export and domestic price made up by the subsidy. The 1938–39 wheat export-subsidy operations constitute an example of this type of plan. The old export-debenture plan also was of this general type, as was the so-called "equalization-fee plan." (Other examples, 75th Congress: H.R. 271, 4835.)

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[2] Attempted price fixing applied to a commodity not exported, or to the entire supply of an exported commodity rather than to the domestically consumed portion, would, of course, not be a form of export dumping. The same is true of price fixing accompanied by production control, *if such control resulted in the elimination of exports*. Otherwise, domestic price fixing is just as truly export dumping as is any of the other forms described herein. The fact that the measure is accompanied by production control has no bearing on the matter, since any of the forms of export dumping, having similar effects as domestic price fixing, also could be accompanied by production control.

(4) A tax could be placed upon the processing of a commodity for domestic consumption, the funds so collected to be distributed among producers in the form of benefit payments. This tax, applied to some commodities such as wheat and cotton, would raise the price paid by domestic consumers and limit the quantities consumed domestically, thus throwing a larger proportion of the supply of the product upon export markets and lowering the price received for the exported portion. Referring to the diagram (fig. 1) once more, the tax would force the effective domestic price up to 11.3, reducing consumption from 260 to 220 units, and increasing exports from 120 to 160 units and reducing the export price from 8.0 to 6.4. This principle was incorporated in the original Agricultural Adjustment Act of 1933, but was made ineffective by the Supreme Court's decision in January 1936. Although few people recognize it as a form of export dumping, it is just as truly so as any of the other dumping plans which have been discussed. (Other examples, 75th Congress: H.R. 7404, 7972.)

As will be evident to anyone who has followed the development of agricultural legislation, there are numerous variations and combinations of the foregoing types of export-dumping plans. In principle, however, all of these proposals are essentially alike.

In connection with the diagram in figure 1 we have observed that from whatever point of departure we start, namely, domestic price, domestic consumption or exports, the circle of events is completed with the same results as to domestic and export prices and domestic consumption and exports. In other words, given the same objectives, the same latitude in and effectiveness of administration, and the same set of economic conditions, the results with respect to prices and incomes received by producers from the operation of any of these different plans would be very similar. The practical differences among them relate to: (a) the commodities included; (b) the price or income goals set up; (c) the relative flexibility in administration permitted; (d) the administrative and political difficulties of execution; (e) the by-products or incidental results, such as inconvenience to producers and marketing agencies.

It is true that under some versions of these plans funds would be provided from the general treasury to finance the export-dumping operations, whereas others would be entirely self-supporting. This, however, is not a difference of principle as between plans, but merely a detail, albeit an important one, of execution.

Under any one of the four types of plans funds from the general treasury could be used to finance the operations in whole or in part, or the plan could be made to stand on its own financial feet. For example, treasury funds could be used to finance export subsidies, as for wheat; but they could be used also to supplement benefit payments from processing taxes (as was actually done in 1933–34), to pay all or part of the costs of putting into effect a domestic price-fixing bill such as S.570, or to finance directly the removal of products from domestic consumption.

Thus, the source of funds is really an incidental and not a fundamental difference. In the following discussion, unless otherwise noted, it will be assumed for purposes of simplification that the costs of any operations involved would come out of the proceeds from the sale of the commodity in the domestic and/or export markets. Expenses of administering the operations also will be ignored except as otherwise noted.

The "Domestic-Allotment" Plan

Under most of the export-dumping plans discussed above, it would be possible to: (a) permit each producer to share in the returns from the domestically consumed portion of the supply accordingly to the number of units of the commodity currently sold or delivered; (b) follow the "domestic-allotment" principle, under which producers would share in the returns from the domestically consumed portion of the supply in accordance with allotments based on production or sales during some past period of years.

Thus, the so-called "domestic-allotment plan" really is not a separate plan for accomplishing the objectives of export dumping, but is merely an alternative feature of such plans. For example, the plan for tagging bales of cotton going into domestic consumption might provide for tagging a certain proportion of all of the cotton currently delivered by each producer to the gin; or, the tags could be divided among producers according to their percentage share in the total domestic allotment, such percentages to be computed as percentages of average total marketings during some previous period. Likewise, domestic price supplements derived from processing taxes could be paid to producers on the basis of their current marketings or on the basis of domestic allotments computed as above. The only form of export dumping to which these alternative methods of making payments to producers might not apply

would be the third group discussed in the preceding section, namely, plans for direct export subsidies.

The domestic-allotment principle would have very decided advantages in connection with most of the export-dumping plans to which it is applicable. The principle advantage would be that the stimulus to increase production, if higher prices and incomes were obtained under the operation of the plan, would be greatly minimized or eliminated if payments to producers were made on the domestic-allotment principle. Since prices for the exported portion of the crop would be reduced below what they otherwise would have been, and the producer would receive only this relatively low export price for all of his production in excess of his domestic allotment, there might be an incentive to hold production to a level even below what it would have been if the plan had not been in operation. Of course, producers might anticipate future changes in allotments and increase production in an attempt to establish a larger base for future allotments, which would tend to defeat the production-control feature of the domestic-allotment principle.

A disadvantage of the domestic-allotment principle is that it may give rise to inequities among producers because of unusual weather or other conditions affecting production during the base period. Thus, it tends to "freeze" undesirable regional production characteristics.

Advantages and Disadvantages of Export-Dumping Plans

The principal advantages claimed for the export-dumping approach to the agricultural problem are: (a) it would put the United States into vigorous competition with other surplus-producing countries for a share of the world market, without being handicapped in foreign competition by attempts to hold prices of export surpluses in the United States above those dictated by world supply and demand conditions; (b) it would obtain for the American farmer a "fair" price in the "American market," placing the farmer on a basis of "equality" with workers in other industries which receive the benefits of the domestic market under tariff protection; (c) provided the domestic-allotment feature were incorporated in the plan, the farmer would be free to produce as much as he pleased for the world market, giving an individually unlimited market to those who because of efficiency in production are able to produce at relatively low costs.

Among the disadvantages of these export-dumping plans are: (1) total returns to producers of many commodities to which they might be applied would be reduced; (2) it would be impossible to find export outlets for the quantities of some of the commodities which would not be consumed domestically; (3) foreign importing nations might take retaliatory action designed to protect their own producers against low prices, further restricting imports of United States farm products; (4) competing exporting nations might attempt to offset the effects of our action by offering bigger and better subsidies of their own; (5) consumers in the United States would greatly resent paying the much higher prices for commodities purchased, resulting in the alienation of public support for measures in aid of agriculture; (6) the operation of the plan would be, in effect, a subsidization of foreign consumers at the expense of American consumers, with producers receiving only a part of the increased costs of domestic consumers; (7) marketing agencies would be greatly inconvenienced by the operation of some types of export-dumping plans; (8) the difficulties and expenses of administration, in the case of some of the plans, would be very great.

In considering these advantages and disadvantages, it is desirable first to observe the economic principles relating to the effects of the export-dumping plans upon prices and incomes received by producers, and the effects of legislative and administrative provisions embodied in the different plans upon their relative efficacy in yielding higher returns to producers.

The Effects of Export Dumping on Prices and Incomes Received by Producers

Given complete latitude in administration of any of these plans, the domestic price could be established at almost any figure desired, in the case of those commodities for which an unlimited export outlet is available. The higher the domestic price resulting from the dumping operations the lower would be the export price, and the greater the decrease in domestic consumption and increase in exports. This will be evident from the preceding discussion of the chart showing the effects of export-dumping operations.

Producers, however, are primarily interested in their total income rather than in domestic and export prices as such. Even though it would be possible to establish a price of $15 a bushel for wheat in the domestic market if the quantity made available for domestic consumption were sufficiently limited, it is obvious

that producers would not be satisfied or benefited if the total returns from the sale of wheat in the domestic and foreign markets were materially reduced as a result. In other words, the returns from the limited quantity which could be sold at the higher domestic price, together with the returns from the greatly increased quantity exported at the low export price, might represent a much smaller total income to producers than would have been received if the crop had been handled in the usual manner without any export-dumping operations. Thus, it is evident that the net change in the income of producers resulting from the operation of the plan would be measured as follows:

(1) Total supply × new percentage used domestically × new domestic price = domestic returns under plan
(2) Total supply × new percentage exported × new world price = total export returns under the plan
(3) Total returns under the plan = sum of above
(4) Total supply × price with no plan = total returns without plan
(5) Net effect on producers' income = difference (plus or minus) between (3) and (4)

This may be illustrated by referring to figure 1, again eliminating from consideration for the moment the dotted lines. With no export-dumping plan in operation total returns from the sale of the commodity will be 260 units domestically consumed multiplied by a price of 8.0, or 2,080, plus 120 units exported multiplied by the price of 8.0, or 960, a total return of 3,040 units of value. With the plan in operation the total returns will consist of 220 units sold at a price of 11.3 or 2,486, plus 160 units exported at a price of 6.4, or 1,024, a total of 3,510. Subtracting the total returns without the plan in operation, we get a difference in returns of 470 value units, representing the increase due to the dumping operations.

It will be evident from the foregoing that the effect of the export-dumping operations upon total returns from the sale of the commodity in the domestic and export markets was greatly affected by the elasticities of the domestic and export demand curves used. For example, if we had used the curves DD' and ED' the results would have been quite different. Returns from the sale of the crop in the domestic market, with the plan in operation, would have been 220 units sold at a price of 8.7, yielding a total return of 1,914. Exports of 160 units would have been sold at a price of 3.7, giving a return of 592. The combined receipts from the sale of the domestic and exported portions of the commodity, under these circumstances,

would have been 2,506. Subtracting this from the total without the plan of 3,040, we find a loss of 534 units of value resulting from the operation of the plan.

Thus, with any given quantity of a product to be disposed of in any year,[3] we could determine with a high degree of exactness the effects of any export-dumping measure upon total returns realized from the sale of the commodity in the domestic and export markets if we knew the elasticities and location of the domestic and export demand curves.

Unfortunately, exact quantitative information regarding the characteristics of domestic and foreign demand for many individual commodities is lacking. For some products, however, we do have approximations which can be used for drawing fairly reliable conclusions regarding the probable results of such plans applied to the specified commodities. A study of the characteristics of domestic and foreign demand for these commodities makes it possible to offer the following conclusions regarding four principal groups of products:

(1) Export dumping could not be applied successfully to a commodity which is not exported or for which new export outlets could not be found at the lower export prices which would prevail under the plan. For this reason, domestic price fixing or any other form of export dumping probably would not work satisfactorily in connection with such important commodities as cattle, sheep and lambs, poultry, eggs, highly perishable fruits and most vegetables. None of these products are now exported from the United States in significant quantities, and some who have studied the problem have concluded that it would be impossible to export sufficient quantities to make possible the successful operation of an export-dumping plan.

(2) No increase in total returns from the sale of the commodity would occur, but rather, losses would be sustained, in the cases of products for which the domestic demand is more elastic than the export demand. Included in this group of commodities, probably, are pork, butter, cheese and apples. Under present restrictions on international trade the foreign demand for these commodities probably is relatively inelastic. The same could be said of lard under conditions prevailing during the past several years.

[3] In order to simplify the discussion, the relation between longer-time effects and the elasticities of domestic and foreign supplies has been ignored.

(3) Other things equal, export-dumping plans would not work as well in connection with commodities for which the United States' exports represent a large proportion of total world supplies, or represent a large proportion of toal domestic production. The reason for this is that a given percentage increase in our exports would have a larger percentage effect on world prices if the proportion of the world supply represented by our exports is large; and if our exports constitute a large proportion of domestic production, the reduced price which it would be necessary to take for the exported portion of the crop would be more important in relation to the higher price obtained on the domestic portion.

(4) The incomes of producers of a few commodities could be increased by judicious application of the principle of export dumping. The two most important of these commodities are cotton and wheat. The domestic demand for these commodities is highly inelastic, whereas export demand is relatively elastic. Thus, raising the price in the domestic market would result in a relatively small decrease in consumption, and returns from the domestic portion of the product would be increased almost in proportion to the rise in the domestic price. The slightly increased quantities available for export could be moved into world markets by means of a price inducement which might result in either an increase or a decrease in the total returns from exports, the probable results being much more debatable than the effects on domestic returns. In any event, however, there would not be a sufficient decrease in the returns from exports to offset the relatively large increase in returns from the quantity sold in the domestic market. It is possible, of course, that foreign governments might take retaliatory action, such as increases in tariffs or tightening of quotas by importing countries and the payment of offsetting export bounties or subsidies by exporting countries. The incentive for such retaliatory action, however, would not be great, since the amount of increase in United States exports resulting from the operation of the plan as applied to these commodities would be rather small.

It is very important to note that the elasticities of demand for individual commodities would be greatly changed if it were attempted to apply any export-dumping plan, such as domestic price fixing, to all commodities at the same time. Analysis of the probable results of such action would have to be on a different basis altogether, and can hardly be discussed in this article.

The Importance of Legislative and Administrative Provisions

It is evident from the foregoing that any type of export-dumping plan might work satisfactorily in connection with some commodities, but would result in actually reducing returns from the sale of many products.

It is also evident that in order to take full advantage of an export-dumping plan it would be necessary to so adjust domestic and export prices and quantities as to bring about an increase in the total returns. If the domestic price were raised too high, a decrease in total returns would result. The exact combination of prices, domestic consumption and exports which would produce the best result would vary as between the several commodities and different years, and would have to be determined as the result of careful statistical analysis. An export-dumping measure applied to some commodities would surely reduce total returns from the sale of the commodity, and as applied to any commodity could be made to reduce such total returns if unwisely planned or administered.

It would be essential to the success of any export-dumping measure, therefore, that the legislation should not be so framed as to result in the imposition of domestic prices which would have such an effect upon consumption in this country, and upon exports and foreign prices, as to result in a decrease in total returns under the plan compared to those which would have been received if it has not been placed in operation. Any attempt to determine in advance, or to fix by legislation, the detailed specifications of prices or quantities, might easily result in failure of the legislation to accomplish the objective, and in any event would be sure to result in less benefit to farmers and to the country as a whole than would legislation permitting a greater latitude in administration designed to take into account careful analysis of domestic and foreign demand conditions before specific action is taken. On the other hand, there might be need for broad limitations on the scope of such administrative powers, for the protection of domestic consumers and to eliminate as far as possible the danger of arbitrariness in administration.

Any legislation designed to effectuate the principle of export dumping, moreover, should not specify the individual commodities to which it is to be applied. Even though careful investigation were made by the legislators to determine the commodities to which the

plan could be successfully applied, conditions might change thereafter so as to result in harmful consequences from the application of the plan under the changed circumstances.

The difficulties which might arise in connection with the operation of a measure not based on these important considerations may be illustrated by reference to a bill introduced in the 76th Congress, S.570. Under the terms of this bill, domestic prices would be fixed at an arbitrary level based on cost of production, and having no reference to the limits set by the characteristics of domestic and foreign demand which would actually determine whether or not the plan would increase or decrease total returns from the sale of a commodity. Even a hasty examination of this measure will indicate that the incomes of the producers of a number of the commodities affected would be substantially decreased.

Administrative flexibility would be almost essential to the successful operation of any comprehensive export-dumping measure, and it would be as easy to formulate a measure having such flexibility as one without it.

Choice Among the Several Types of Export-Dumping Measures

Assuming the same underlying economic conditions, and the same latitude in and effectiveness of administration, any of the several types of export-dumping measures which have been described, applied to a given commodity, would result in approximately the same effects on total returns from the sale of the commodity. Great differences would rise, however, with respect to the costs of operation, the difficulties of enforcement, and the degree to which consumers and marketing agencies would be disadvantaged.

Under S.570, for example, the administrative costs of carrying out the provisions of the bill might amount to from 150 to 200 million dollars per year. In addition, the Government would incur the expenses of processing, handling and exporting large volumes of the affected commodities, in a total sum amounting to perhaps 800 million dollars per annum. Although it is probable that the Government would be reimbursed for all of the expenses of processing and handling from the returns received from the sale of the exported commodities, the amount of the costs involved give some indication of the tremendous organization which would have to be built up and the extent to which the Government would actually

enter into the conduct of private business. Under another bill introduced in the 76th Congress, S.1405, the Government would practically take over all of the marketing operations from producer to processor. In various other export-dumping proposals which have been considered by the Congress in recent years, greater or less degrees of Government participation in business and of administrative complexity are involved.

There is a wide difference among the several export-dumping plans with respect to the degree of inconvenience caused consumers and marketing agencies, and the extent to which they would be placed at an economic disadvantage. In some instance, many marketing agencies would be done away with entirely, while in others their activities would be curtailed or subject to a large degree of Government supervision. On the other hand, under some plans it would be necessary to interfere very little, if at all, with the operations of marketing agencies.

Likewise, the effects on consumers would vary widely, depending on the price goals established and the kind of commodities affected. In any event, export-dumping plans represent, in effect, a subsidy to foreign consumers at the expense of American consumers or tax payers. However, the cost to domestic consumers or tax payers, relative to the gains by foreign consumers and increases in incomes of domestic producers, would be quite different under the several plans, because of differences in the price goals established and the commodities included.

Taking into account all of the considerations which have been set forth in the foregoing pages, it seems evident that the most simple and easily administered export-dumping plan is that providing for direct export subsidies by the Government, such as the wheat export subsidy of 1938–1939. There are at least two difficulties connected with such operations, however, which limit their practicability. In the first place, it might not be politically feasible to make the subsidy operations sufficiently extensive to result in any very marked enhancement of domestic prices. In the second place the amount of funds available from the general revenue for such purposes may be definitely limited. It would be possible, of course, to obtain revenue for the operations by means of a processing tax on the commodities involved.

The next most simple and easily operated export-dumping plan is that involving the making of benefit payments to farmers

financed by domestic processing taxes. This plan, next to a straight export subsidy, involves least disturbance to the marketing system and would be the least trouble to producers. Moreover, since the domestic allotment feature can be incorporated in such a plan, its results need not serve as a stimulus to domestic production, as might higher prices obtained by means of a direct export subsidy. Such a plan is self-financing, in the sense that no additional sources of revenue, or appropriations from the general Treasury, are required. On the other hand, the processing tax method is subject to two apparent disadvantages. In the first place, producers would not be able to see the fixed domestic price features of the plan as easily as they would under some of the others proposed, and therefore might not be as favorable to it; also, distribution of the payments on the basis of domestic allotments may occasion some inequity as among producers. In the second place, there is a general aversion on the part of consumers and the public to taxes in any form and it may be that consumers would rather pay the same price in the form of a Government fixed price than they would in the form of a price established or influenced by a tax. These, however, are mainly psychological disadvantages which might be overcome by proper educational measures.

Another export-dumping plan, relatively simple and effective in operation, would be one providing for limitation of the proportion of the total supply of the commodity to be used domestically. It would be a relatively simple matter to provide for the mechanics of such a plan in application to processed commodities, by means of "domestic processing certificates." (The writer has outlined a plan of this nature which is designed to avoid many of the undesirable features of other specific export-dumping proposals.)

The direct price-fixing plans would be most difficult of all to administer, would be more susceptible to breakdown in operation, would involve the greatest inconvenience to marketing agencies and producers, would cost the most to administer, and would be most likely to yield less than maximum benefits to producers because of the lack of flexibility in administration.

None of the plans can be of value in increasing returns to producers of many commodities, and none of them can be made to bring about agricultural prosperity in the presence of generally unfavorable economic conditions or unbalanced agricultural production.

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ROLE OF SOIL DEPLETION IN LAND VALUATION

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THE depreciation in the land itself is an annual cost seldom taken into account in estimating net rental income. Recognition of this cost seems necessary in order to determine correct net rents and land values. It is the purpose of this paper to illustrate the application of annual rates of decline in physical productivity in determining correct net rent, and to apply the capitalization principle to a finite series of diminishing future net rents in order to aid in the appraisal of their present value.

Nitrogen Content as a Measure of Productivity

Soil technicians have measured the annual effect of different land uses on total surface nitrogen content.[1] These effects, both as to crop removal and erosion, have been calculated for different degrees and lengths of slope.[2] In the references cited, and in this paper, total surface nitrogen content is used as the measure of "Soil Capital," since in the Corn Belt, yields are related very closely to both total nitrogen and organic matter content. Furthermore, in the southern Corn Belt a rather high correlation has been found between total surface nitrogen content and land value.[3] It is recognized that this measure of physical productivity may not be so closely related to land value in all sections of the country as it appears to be in certain sections of the Corn Belt.

Calculation of Productivity Changes Within an Area

In appraising the approximate productivity loss brought about by land use in a particular area, it is necessary to know the cropping history. This information can be secured from census data

* The writer is grateful to Conrad H. Hammar for giving critical aid during the preparation of this paper, and to several others who contributed valuable suggestions. The views presented are personal and have not been submitted for approval of the Soil Conservation Service.

[1] R. M. Salter, R. D. Lewis, and J. A. Slipher, Our heritage—The soil. Ohio Agr. Ext. Ser., Bull. 175, April 1936.

[2] A. W. Klemme and O. T. Coleman, Evaluating annual changes in soil productivity. Mo. Agr. Exp. Sta., Bull. 405, June 1939.

[3] Conrad H. Hammar, Factors affecting farm land values in Missouri. Mo. Agr. Exp. Sta. Res. Bull. 229, September 1935.

only on the basis of civil divisions, such as the county. Relative uniformity as to topographical features is also essential, because of the problem of dealing with erosion losses. Therefore, use is made of census data covering the year 1929 for Audrain County, since nearly 90 per cent of its area consists of Putnam Silt Loam, a soil type which is relatively uniform in topography. It is assumed that the land use pattern and livestock population for the year 1929 represents normal for the period just preceding the serious drought years and the effects of the depression.

Using the technique cited, annual productivity changes are shown in table 1, for Putnam Silt Loam, a southern Corn Belt soil in an area where nitrogen content is probably the most important measure of physical productivity. In this way a general over-all indication of the approximate physical effect of continued 1929 land use, is obtained. From this can be taken the additional step of relating such productivity changes to land value. Where it it possible to make such application on an area basis, the indicated results should be of interest to lenders and to investors in farm land. A more exact measurement of changes in physical productivity can of course be made with respect to individual farms, since all variations in topography and land use are then taken into account.

The Annual Rate of Productivity Loss on Putnam Silt Loam

In determining the annual productivity and erosion effects of each use shown in table 1, it was necessary to establish rotation practices since the value of factors expressing erosion loss following a particular crop is determined in part by the preceding crop. A rotation scheme was established by estimates based upon census data and upon familiarity with cropping sequence commonly practiced locally. Table 1 shows the use of all land in farms in Audrain County, for the year 1929.

A three per cent annual loss in productivity from the remainder each year would require only slightly more than 31 years to bring the total surface nitrogen content from its 1929 level of approximately 2,500 pounds per acre, to 1,000 pounds per acre. Under present conditions as to general type of farming practiced, size of units, and financial status of operators, the rental income of 10 bushel corn land (1,000 pounds N per acre) is practically zero.

Figure 1 indicates the shape of the physical productivity curve

until the "no rent" level would be reached, assuming the land use of 1929 to be continued. It is necessarily assumed that all other features of relative land capability affecting rent and value remain constant.

The lowest cost by which the productivity existing at the time of appraisal could be retained in the land, represents a charge which must be included along with other land costs, or by that

TABLE 1. ANNUAL PRODUCTIVITY LOSS FOR THE COUNTY

Crop	Acres	Percentage of productivity changes due to:			Percentage of net productivity change
		Plant growth	Fertilizer	Erosion	
Intertilled crops	92,451	−1.35	0.32*	−6.60	−7.63
Small grain	56,791	−1.00	0.02*	−4.35	−5.33
Hay	33,083	+0.03	—	−1.93	−1.90
Rotation pasture	12,235	+0.42	—	−0.59	−0.17
Permanent open pasture and meadow	91,933	0.00	—	−0.50	−0.50
Woodland	32,942	0.00	—	0.00	0.00
Idle	54,258	0.00	—	−0.45	−0.45
All other land in farms	11,298	0.00	—	0.00	0.00
Weighted average productivity loss					−2.97

* Effect of manure application and fertilizer use as shown by livestock population and fertilizer sales for 1929, respectively. It is assumed that 5/12 of the total manure production was applied to the intertilled crop. The remaining 7/12 is accounted for in factors for pasture. All commercial fertilizer is assumed to have been used on the small grain.

amount, values computed from uncorrected anticipated earnings, will be fictitious. The vertical distance from any point on the curve to the dotted line above represents the productivity loss at any particular time. The costs of restoration may often be prohibitive, after productivity has been carried to a low level. Prevention, or at least marked retardation in the rate of decline is quite another thing, however, since in many instances this can be accomplished at no cost as compared with other alternatives, except the cost of superior management. This point will be discussed later.

A practical point may be mentioned here with respect to repayment plans for farm mortgage loans. For example, in the case of Putnam Silt Loam, figure 1 suggests the desirability of repayment schedules which require a decreasing annual burden on the borrower.

A point which may be raised regarding the implications of figure 1, is that it cannot be assumed that the land use pattern outlined in table 1 will continue until the indicated annual loss in productivity would render the land valueless. Since 1929 there have been

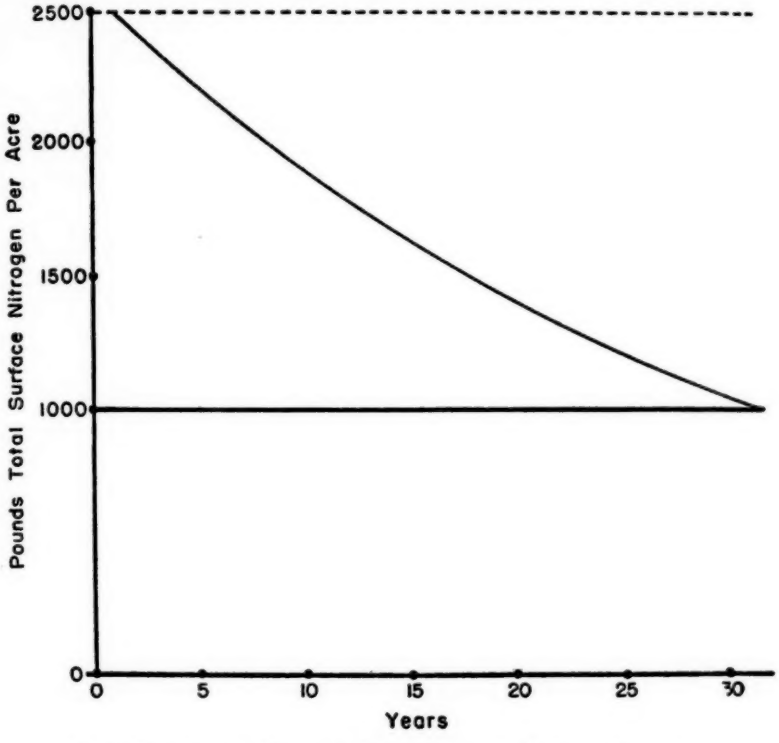

FIG. 1. DIMINISHING PHYSICAL PRODUCTIVITY OF PUTNAM SILT LOAM.

significant developments which are tending to check the rate of productivity loss. However, while individual farmers are adopting more conserving systems, it is doubtful whether as yet such systems have materially checked productivity losses for the area as a whole. It appears that in appraising farms in this area, the system most likely to be followed will by no means eliminate productivity loss. Universal adoption of systems which would check the loss in productivity and at the same time maintain current net income, would, of course, maintain values, assuming no change

in the demand for land. However, figure 1 is intended to point out only the probable physical effects of continued 1929 land use.

In the case of many partially depleted soils, adoption of conserving systems require the return of a considerable proportion of the land to permanent sod. This shift would tend to reduce rents and values, since, other factors remaining constant, the economic productivity of such use is lower than that of the previous use before depletion had reached its present stage. Furthermore, it is very difficult to restore worn-out crop land to productive pasture uses, and as a result, much of such land is abandoned.

A question might also be raised regarding the use of a three per cent annual rate of depletion throughout the whole period, the thought being that as productivity reaches lower levels, the annual rate of decline diminishes. Figure 1, however, does not attempt to portray the rate of loss beyond the point which quite obviously approaches the "no rent" margin under present conditions. But the shape of the curve in figure 1 corresponds roughly with losses in total nitrogen content caused by growth of corn, wheat, and oats on land that is "nearly level so that practically no erosion took place."[4] This investigator states: " . . . Sixty years of cultivation have reduced the fertility of the soil about one-third. It should be kept in mind that these results were obtained on non-erosive level land, and that on slopes or hilly land erosion may greatly increase these fertility losses."

The shape of Jenny's curve of fertility loss on non-erosive land differs from figure 1 only in that it is more abrupt during the first few years following virgin sod and less abrupt during the latter years of cultivation. But it has been generally assumed that erosion proceeds at an accelerated rate as the supply of organic matter diminishes. Thus, graphical expression of erosion loss alone as related to organic matter decline on erosive land would indicate a more rapid productivity decline than is represented by figure 1, which includes losses caused by both plant growth and erosion.

Further analysis of the data shown in table 1 on which figure 1 is based, discloses that 87.5 per cent of the total annual productivity decline is the result of erosion loss, and only 12.5 per cent due to direct crop effect. It appears, therefore, that figure 1 does not overstate the problem of annual productivity decline of Putnam Silt Loam under 1929 land use.

[4] Hans Jenny, Soil fertility losses under Missouri conditions. Mo. Agr. Exp. Sta. Bull. 324, May 1933.

In appraising the effect of fertility decline on future rent and value, it should be borne in mind that operating costs, and, after a certain minimum has been reached, living costs do not decline with fertility losses. Thus, a point is reached when tenants can no longer pay the previous share rent and secure any return for their labor and capital. Therefore, productivity decline not only reduces the total physical product of the land, but also reduces the land-

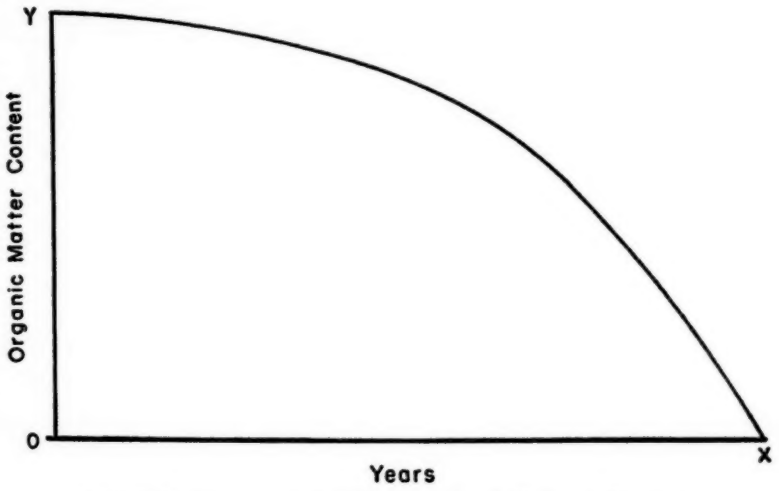

FIG. 2. HYPOTHETICAL CURVE ILLUSTRATING RATE OF EROSION AS RELATED TO LOSSES IN ORGANIC MATTER.

lord's share of what is produced. This fact is important to the prospective investor in farm land, as well as to the appraiser.

It is of course true that land values may be expected to rise during the earlier stages of exploitation. The situation discussed here, however, is one in which the rate of depletion associated with past systems would be uneconomic.

Application to Land Value Theory

The average net cash rent for cash rented farms in the Putnam-Lindley type of farming area (including Audrain and several nearby counties) in 1929, was $2.95 per acre.[5] The percentage that each year's nitrogen loss (fig. 1) bears to the total loss for the

[5] Estimated from gross cash rent records of Columbia, Missouri, office, Div. Agr. Stat., Agr. Marketing Service.

period, was applied to the 1929 net rent of $2.95 per acre, in order to establish the curve of diminishing net rents for Putnam Silt Loam, as shown in figure 3.

The value per acre of Putnam Silt Loam as arrived at through capitalization of net rent, would be $2.95 ÷ .05, or $59.00. The reported market value in 1929 was $59.40.[6] Figure 3 assumes sta-

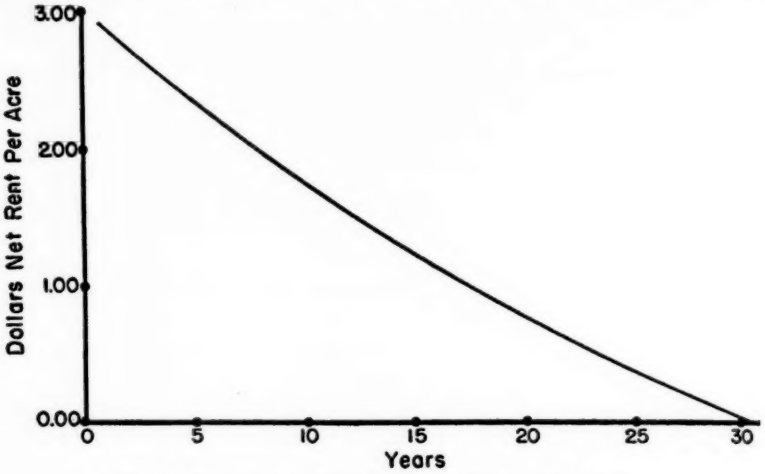

FIG. 3. DIMINISHING NET RENTS ON PUTNAM SILT LOAM.

bility in prices, the interest rate, and in the demand for land, and that except for the decline in physical productivity, net rent in the illustration used would remain at $2.95 per acre. However, the land use prevailing in 1929 would, on Putnam Silt Loam in general, result in an annual loss of approximately 3 per cent in the stock of surface total nitrogen. Because of the close relation between the latter, yields and land values, in this area, such stock may be considered "Soil Capital." Thus, all of the $2.95 would be truly net rent only if under static price and demand conditions the same return would be forthcoming annually. But, under conditions of declining physical productivity, a part of it is capital. Since there is an annual loss in capital, it follows that, other things being equal, there must be an annual loss in the income from capital.

Gross Rent Contains an Element Similar to Quasi-Rent

It is of interest here to note that to the extent the annual rent includes an amount which represents removal of capital from the

[6] Columbia, Missouri office, Agricultural Marketing Service, *op. cit.*

land, it is in reality "quasi-rent," since it arises from a supplementary land cost. Except for the fact that such an amount represents removal of capital, rather than net return from capital left intact, its significance would be the same as that of interest, the only difference being that it is a lump sum rather than a ratio. It is an annual loss which must be deducted from the gross rent, in order to arrive at correct net rent for capitalization purposes. Proper understanding and use of factors expressing productivity changes due to plant growth and erosion makes an approximate deduction possible. Such use will also aid in furthering recognition of the significant distinction between land capital and land space. Recognition of this distinction is important to the practical farmer and the investor in farm land, as well as from the viewpoint of public policies affecting land use.

Application of Theory of Decrements in Computing Land Value

The problem of dealing with annual increments in net rent in order to arrive at present value has long been handled through use of the formula, $V=(a/r)+(i/r^2)$.[7] Capitalized value derived from sustained annual net rent, with no increase or decrease is, of course, computed through use of the formula, $V=a/r$. In both of these formulas, the "a" represents an infinite series. But under conditions of declining productivity, assuming other rent determining factors remain constant, the problem is one of determining the present value of a finite series of anticipated future net rents. Fortuitous commodity prices or improved techniques may off-set for a time, declines in physical productivity, but in the absence of adoption of more conserving systems, the base from which agricultural rents are secured would be constantly shrinking. The "a" as expressed in the above formulas, is partly fictitious when applied to Putnam Silt Loam under 1929 land use conditions, because it assumes a sustained income from the land under conditions of declining physical productivity. There is an annual decrement, which as figure 3 indicates is not a constant, which must be deducted from the remaining income commonly attributed to land each year in order to arrive at corrected successive net rents. The following formula is suggested:

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[7] Dr. Wilfred I. King.

$$V = a + \frac{a - d_1}{(1+r)} + \frac{a - (d_1 + d_2)}{(1+r)^2} + \frac{a - (d_1 + d_2 + d_3)}{(1+r)^3} + \cdots \frac{a - (d_1 + d_2 + d_3) \cdots d_n}{(1+r)^n}.$$

Value is then computed by substituting in the above formula the successive decrements on which figure 3 is based.

$$V = \$2.95 + \frac{\$2.95 - .1475}{1.05} + \frac{\$2.95 - (.1475 + .1431)}{1.1025} + \frac{\$2.95 - (.1475 + .1431 + .1388)}{1.1576} + \frac{\$2.95 - (.1475 + .1431 + .1388 + .1346)}{1.2155} \cdots$$

$$= \$26.7780.$$

Thus, under the land use system prevailing in 1929, the productive value of Putnam Silt Loam was at that time about $27.00 per acre, or less than one-half the value derived by capitalizing the uncorrected net rent. The market value of this land in 1929 reflected a significant error in judgment and appraisal on the part of investors and lenders, aside from their inability to forecast prices. Further development in ability to evaluate productivity changes under different land use systems will aid materially in reducing such errors.

Decrements (or Increments) other than Those Induced by Productivity Changes

Decreases, or increases, in net rent may, of course, be the result of different forces. Perhaps those induced by changes in physical productivity of the land are anticipated more easily than those due to other causes, once the most likely future land use has been determined. Ownership costs, such as taxes, expenses of maintenance and of management, or other factors such as price changes or changes in the demand for land, all of which will affect the future net rent, are less easily forecast than is the effect of declining physical productivity.

It should be pointed out that land use systems which will result in annual increases in physical productivity are possible, particularly on less productive lands where more conserving systems will yield greater current returns than continuation of systems commonly practiced in the past. Under such systems the annual increments can likewise be calculated. In such instances the formula $V=(a/r)+(i/r^2)$ becomes applicable, insofar as the "i" pertains to increments anticipated because of increases in physical productivity of the land. In the application of a theory of decrements, all of these factors should be carefully weighed, and an attempt made to evaluate the net increment or decrement, as the case may be. When the net result is a decrement, use of the capitalization method as a check, in arriving at correct value, involves dealing with a finite series of net rents.

Once the size of the anticipated annual decrement is determined, there remains the problem of choosing the capitalization rate. It is not the purpose of this paper to discuss this problem, other than to point out that the local farm mortgage interest rate most commonly paid in recent periods is the one most widely used.

Other Effects of Declining Physical Productivity

There are some other effects of declining physical productivity on land value, any quantitative measure of which is not attempted here. One of these, the effect of declining yields on the share of the crop accruing to the landlord, has already been discussed. In that connection, crop yield history does not always reflect the productivity trend of farm land in general in a given area. In many instances certain crop yields have been partially maintained only by restriction of their acreages to the better and least erosive areas of the farms. Furthermore, yields have often been maintained by improved techniques, some of which require additional annual inputs of capital or management. The additional cost of these inputs must be deducted from gross rent in evaluating land which at the time of appraisal is in a high state of productivity only because of these annual additions which are necessary for its upkeep. In other words, the lowest cost by which physical productivity of the land can be maintained, must be taken into account in order to keep land values realistic.

Another factor is that as land declines in productivity, certain

costs of operation increase because cultivation becomes more difficult, risks increase, water holding capacity declines, and the presence of weeds, insect pests and diseases render more imperative certain outlays for their control. Increasing costs of this type tend to reduce rent rates and land values.

Declining Productivity and the Rising Ratio of Rent to Value

Persistent rise will be noted in the ratio of gross rents to value. Real estate taxes have declined, and while no data are shown with regard to interest rates on farm mortgages in the area, the general trend in the interest rate has been downward. At least it is safe to

TABLE 2. RENT, VALUE AND RATIO OF RENT TO VALUE PER ACRE FOR CASH RENTED FARMS, PUTNAM-LINDLEY AREA, 1929–1939
(Includes Audrain and several nearby counties)

Year	Index of gross rent* 1929=100	Index of value* 1929=100	Ratio of gross rent to value
1929	100.0	100.0	7.0
1930	87.8	79.8	7.7
1931	73.6	70.2	7.4
1932	60.9	50.8	8.4
1933	49.2	48.8	7.1
1934	55.2	49.6	7.8
1935	49.4	46.0	7.5
1936	50.6	46.6	7.6
1937	56.1	46.2	8.5
1938	51.8	41.9	8.7
1939	55.4	42.0	9.3

* Columbia, Missouri, office, Agricultural Marketing Service, *op. cit.*

say that there has been no recent rise in farm mortgage interest rates. It would seem, therefore, that the rising ratio of rent to value may in part be attributed to declining productivity of the land. It would appear that were it possible to eliminate the effect of other factors, a higher ratio of rent to value would be expected to occur in those areas where the present rate of erosion is highest.

The Factor of Management in Conserving Land Values

It is recognized that good land cannot be made from poor land by merely changing to systems having lower fertility requirements. The contribution of revised systems such as is suggested in table 3 is to prevent, or at least retard, the rate of productivity decline, and in some cases, to pave the way for whatever degree of restoration may later become feasible.

Table 3 illustrates for a particular farm, the effect on physical productivity of adoption of an improved and more conserving system which offers opportunities for increased current net income on partially depleted land. This will keep such land in greater demand for farming purposes, than would otherwise be the case. Thus the marginal product of the land would be raised, and rents and values would be increased from previous levels because of capabilities given land as a result of technological improvements.

TABLE 3. ANNUAL PRODUCTIVITY CHANGES OF FARM UNDER TWO SYSTEMS

	Original system	Revised system
	Percentage	Percentage
Net productivity changes	−2.05	−0.0032

The revised system is this illustration would substantially increase current net income.[8] Unless material sacrifice in current returns can be avoided, there is no economic basis on which to expect individual farmers to conserve soil. This is especially true on low income farms where the premium on present income is high. The problem, therefore, is to establish complete conservation systems which will at least maintain current net returns. In many instances investors, particularly in less productive and more erosive lands, have at present no better investment outlet for their capital than to insure its future productivity by judicious land maintenance or improvement.

Application to Present Use Versus Most Likely Future Use

Unless the investor discounts future earnings of land not only on the basis of the capitalization rate, but also by the annual cost of maintaining the present physical productivity, he will be paying the seller for improvements which he, himself, expects to make. Even though these improvements involve no additional cash outlays, the seller would be benefiting from the buyer's anticipated superior management.

It is, of course, true that the market value of land will be determined largely by comparing its anticipated earnings with those to be expected from investments in other lines. The important point

[8] Donald B. Ibach, New farming systems applied to Southwest Missouri upland farms, Mo. Agr. Ext. Ser. Cir. 370, October 1937.

is that investors in farm land should have a more complete concept of costs coincident with maintaining physical productivity of the land. Some of these costs will be represented by direct cash outlays, while others will be represented by improved management. In either case, failure to deduct them from gross rent will result in over-valuation of land.

The problem is one of recognizing and evaluating the capital in land. Measuring and evaluating changes in physical productivity of land will permit more equitable appraisal whether net rents are estimated on the basis of the seller's use, or the "most likely" use. Until the investing public generally comes to recognize that the "capital in land" is subject to depreciation as are other forms of capital, there will be a tendency toward over-valuation irrespective of the land use basis followed in appraisal practice. This is particularly true of the uninformed investor in less productive or highly erosive land.

More complete understanding of the measurement and evaluation of changes in physical productivity on the part of farmers and other investors would tend to hold the market value of land in line with its productive value. Furthermore, those who are interested in security of tenure and in productive returns for their labor and capital, rather than in speculation, are also interested in seeing land values kept in line with corrected net rents.

Use of Method in the Field of Farm Mortgage Credit

Adoption of this point of view by lending agencies would in any given area contribute much to the establishment of land values based on corrected net rent. Such a policy would promote security of tenure on farms and would tend to off-set errors of optimism which are difficult to avoid because of inability to forecast prices. Once farm mortgage credit was established on such a basis the risk to both borrower and lender would be greatly reduced. Furthermore, an analysis of this type thoroughly understood by all the borrowers in an area before the loans were made would have a significantly favorable effect on the general level of management.

RECEIVED DECEMBER 13, 1939

COUNTY PLANNING FOR LAND-USE ADJUSTMENT

J. G. Crawford* and Gunnar Lange**

WE MAY assume that county land-use planning[1] has arisen out of the depressed state of agriculture. This depressed state may be associated with four categories of factors all of which must be given a place in land-use planning discussions. These are: 1. Unfavorable price and income relationships for agricultural and industrial products in comparison with earlier periods. This "maladjustment" reflects a great number of factors comprised in the shifts in demand for agricultural produce and relative price rigidities in the industrial sector supplying the needs of agricultural producers. 2. Land erosion created by certain, and frequently traditional, types of operating practices. 3. The stagnation of economic activity in the non-agricultural (mainly industrial) sector of the American economy, thus stopping the "normal" flow of fresh workers from rural to urban occupations. 4. A consequent aggravation of the increase in the agricultural population and particularly in the number of persons of working age. This increase must look to relief work or agriculture for absorption while industrial stagnation, is slowly corrected. The result of these phenomena have been the series of emrgency measures undertaken by the different public agencies administering the "national farm program." This program has drawn attention to the need for long-time economic planning in agriculture, for it has become increasingly evident that the problems of agriculture will not disappear without Government intervention and that much of the New Deal program is "emergency" only in a long-run sense.

It is not surprising then, that, in general, land-use planning work presupposes the continuance of present programs and that the long term goals for agricultural policy which the planners are asked to establish are conceived broadly in terms of present action agencies. This point arises clearly in the usual statement of objectives

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[1] We refer to the system of non-statutory county and state committees set up under the aegis of the BAE and Land Grant College Extension Staff with joint farmer and expert representation. The committees have advisory powers only.

and is given practical application in the injunction to unified counties[2] to present their plans for adjustment within the limits of the present operations of existing agencies.

General Objectives

Three statements may be taken as representative of the general objectives held by those behind the planning movement. Secretary Wallace wrote in the "New Republic," November 8, 1939: "We are slowly building a mechanism, county by county, in collaboration with the land-grant colleges and the Extension Service, by means of which farmers themselves will determine the elements of their total agricultural program, will decide how these elements may be welded to-gether in one effective program, and, finally, will administer that program." In an earlier address before the BAE,[3] Mr Wallace laid less stress on the determination and administration of a welded national program by farmers and much more on the need for effective co-ordination of over-lapping programs. To quote: "We are definitely in the process of making a new synthesis for many branches of Government. Especially here in the Department of Agriculture we are trying to discover new bottles into which to pour new wine. Those of us who have worked on departmental re-organization feel that if the type of organization fits the work to be done, we will ease the operations amazingly. By successful re-organization, we can call forth the powers necessary to meet the expectations of the farmers, to enable us to do a better job of handling the land, and to get more per dollar of money for everyone." The real stress here was naturally on the need for departmental co-ordination but, even in this address, Mr. Wallace went a little further. The BAE was encouraged to achieve co-ordination through close contact with the action agencies in the field. He expressed his approval of planning on a county level in this regard and as a necessary means of avoiding bureaucratic propensities towards power "of the sort which are almost invariably displayed in Washington when new activities get started."

Mr. Bushrod Allin has expressed similar ideas on several occasions. In an address before the Regional Extension Conference for the Northeastern States at New York City on March 2, 1939, he re-

[2] A unified county is one in which the fact finding work has been exhaustive enough to enable a plan of long-run objectives to be transplanted into specific goals for unified action by the appropriate Federal, State and local agencies in 1940.

[3] March 20, 1939.

ferred to the degree of co-ordination already achieved by the action agencies as a remarkable achievement despite duplication of effort here and there. "Farm leaders however," said Mr. Allin, "are aware that an aggressive effort to harmonize our action programs is needed if the gains made up to this point are to be maintained, and if further advances are to be made towards a satisfactory agricultural policy." For this purpose, Mr. Allin emphasized the democratic process, saying in the same address: "Leaders and workers in agriculture are convinced that the only way to obtain lasting results is *for the farm people, with the assistance of technical workers and administrators, to plan for, develop, and administer an agricultural program that will reconcile local and national interests.*"[4] This statement goes quite as far as Mr. Wallace's "New Republic" article—farmers are to determine, with the assistance of technical experts and administrators, and to administer the program (at its local levels, presumably). Both Mr. Wallace and Mr. Allin seem to point towards new programs for agriculture or at least important adjustments to those in existence. In his "New Republic" article, the Secretary emphasized democratic planning to the extent of saying: "Our job in the Department and the Colleges is to put the facts before them (the county planning committees) and to abide by their decisions." Under-Secretary, Mr. M. L. Wilson, is of the same general opinion as the two officials quoted. For him: "An efficient, harmonious and sensible program in each agricultural county of the United States is the goal of this new planning structure . . . . The program in the county in which the farmer lives, will be his program and it will be up to him to help plan it and make it work."[5]

It seems clear that the objectives of county planning comprise the co-ordination of the different action programs in agriculture and to develop long time goals for agricultural policy, both through a democratic process in which the farmers themselves will directly participate. According to the various statements of objectives the county committees range all the way from mere (albeit useful) sounding boards for proposals concocted in Washington to bodies which, despite, their merely advisory character, will determine and administer the national farm program. The Mt. Weather Agreement comes in between these extremes. It is the purpose of this

[4] Italics ours. Excerpts are from a mimeographed copy of the address.
[5] See, Land Policy Review, Jan.–Feb., 1939, p. 3.

paper to suggest that exaggerated claims for the possibilities of county agricultural planning should be avoided. This caution follows from any study of the limits in which, perforce, county planners must work. Given these limits, it may prove impossible "to abide by their decisions" because of the impracticable plans produced by the farmers. Mr. Elliott[6] is much aware of the difficulty of plans made at the farm level. The fusion of expert and lay opinion is not a simple matter; for Mr. Elliott, the test is the practicability of the resultant plans. However, it is difficult to define what is "practical" unless precise limits are drawn. Vague reference to "public need" and "general welfare" are insufficient by themselves. Concrete interpretation will vary from county to county so that a uniformly conceived and uniformly applicable national program is an unlikely result. On the other hand, to ask the farmer to assume the present framework of the farm program is to debar or, at least, hamper, constructive formation of a new national program from the bottom up. The farmers are virtually forced to keep their planning on a local level. Even were the farmer encouraged directly to develop a new framework, however, a fundamental difficulty would remain in the partial nature of agricultural planning. It is proposed to develop these points briefly beginning with the last first.

Over-all Versus Agricultural Planning

Let us revert to the opening paragraph reviewing the causes of agriculture's plight. How does planning propose to tackle these? Judging from the statements reviewed earlier, and others of like nature, it is evident that "agricultural planning" is thought of in terms of the "parity" price (or income) relation between industry and agriculture and in terms of soil erosion.[7] These are the major objects of attack in the present program, co-ordination in which is sought through planning. Stagnation in industrial activity and the relative growth of rural and urban population are aggravating factors, but are not as a rule the subjects of direct attack by agricultural planners.[8] In theory at least, however, the problems of agriculture

[6] See, Land Policy Review, May–June, 1939, p. 3.

[7] Cf. Mt. Weather Agreement: Objective 3—*inter alia*: farmers to develop programs and policies for the purpose of "correlating current action programs to achieve stability of farm income and farm resources."

[8] Planners are, of course, concerned with the low income families—frequently the large families in rural areas. A typical approach to this problem is to improve self-subsistence farming practices. Our point here relates to the urban employment opportunities for a more rapidly growing rural population.

could be tackled principally through programs or public measures which changed the industrial situation by increasing the rate of expansion in the non-agricultural sector of society. Agricultural planners might well, in their own self-interest, devote their energies to pushing public investments of permanent nature or of pump-priming character, or to schemes designed in other ways to promote increased activities.[9] Such plans may be a long way from the farm and yet be of direct relevance to agriculture. Apart from the fact that agricultural incomes are directly responsive to industrial activity, there is the important fact that increased non-agricultural activity is necessary to draw off surplus agricultural population.[10] The importance of this last fact is manifold for agriculture for not merely is there the problem of future increases in agricultural population, but the very present problem of too many people on the land[11] with no agricultural frontiers (especially in terms of markets) in sight for the absorption of people who might be displaced by planners. Many of the agricultural plans put forward in recent years are in terms of increased operating units involving displacement of farm operators. With both agricultural and industrial frontiers apparently closed,[12] such solutions are not feasible on a national scale except in terms of public works, subsidized subsistence agriculture or of direct subsidies to unwanted commercial agricultural production.[13]

We certainly do not expect the county committees in general to indulge in over-all planning of this sort, nor even that agricultural economists can do much more than stimulate thinking in this field. Nevertheless, even if agricultural planners make no direct approach to their own problems through industrial planning, they must, willy nilly, make some assumptions about industrial (and world economic) expansion. All long-term goals expressed in terms of increased farm unit or of increased use of labor displacing technique

[9] Cf. M. Ezekiel, Jobs for all. Also see article by James Caven, Idle men, idle plants—and farmers. Land Policy Review, July–August, 1939, p. 12.

[10] A centralized planned economy would probably make some adjustment of this type.

[11] This is simply an aspect of the declining field for agricultural employment associated with an increase in output per head at a rate faster than the growth in consumers' markets. (See e.g., Trends in employment in agriculture: 1900–1936, by Shaw and Hopkins. W.P.A. Research Project).

[12] Consider e.g., the implications of Prof. O. Lange's paper—Is the American economy contracting. Amer. Econ. Review. Sept. 1939.

[13] After these words were written, the problem of displaced farm labor was vividly presented by Paul H. Johnstone in Somewhere else, an article in Land Policy Review, Nov.–Dec., 1939.

in agriculture, involve a problem of absorption of people in other areas of agriculture or in non-agricultural activities—no plan on a national scale can shelve the problem. Again in estimating farm income per unit of operation, assumptions have to be made about prices and costs. To what extent are these determined by further assumptions as to the course of world markets or American industry—agriculture's chief home market? To the extent that these matters are not deliberately thought through, the average behavior of some past period is assumed and projected into the future. There may be no alternative to some such process, but will planners in the counties have a uniform basis? Thus, will Montana planners assume $1.00 per bushel for wheat and Kansas $0.75? If there are not common assumptions can the plans of the counties be aggregated to make "a sensible national plan"?

We suggest that the local committees have not been given the necessary guidance in these matters.[14] The only background assumptions of nation-wide scope are those implicit in the production control, soil conservation and the other farm programs. Long time agricultural planning requires more than this; it can only be made independent of non-agricultural planning on the basis of a set of realistic assumptions about non-agricultural economic behavior. Such assumptions would probably deflate many of the existing plans which assume the absorption of part of the county population in other occupations or in other areas. On the other hand, perhaps, the plans would be more nearly complete than at present—more attention would be given to the sociological implications of the economic adjustments proposed.[15]

Agricultural planning is but partial planning at best and, in our view, its scope will prove more restricted than is at present realized, unless some attempt is made to integrate it with over-all planning

[14] It is difficult for local planners to make real assumptions about trends in output elsewhere, markets, employment, absorptive capacity of industry and the like. For this reason, we were surprised at Mr. Bushrod Allin's insistence (in Seminar discussions at Harvard) that such assumptions were the affairs of the local planning body. We disagree. The most these bodies can do effectively is to estimate possibilities of expansion in local industry (especially part time) new agricultural resources and other data relating to one segment only of the national picture.

[15] The writers freely admit their limited bases of judgment in terms of unified county plans of which but few are available as yet. Moreover, the problem is clearly posed in some cases. Thus, Young County, Texas, expects to grapple with it in 1940 for their recommendations involve a drop in farm units from 1840 to 1089. (See, D. A. Adams, Land Policy Review, March–April 1939 p. 35.) However, the problem is wider than the county and it will not be possible in every case to hand it over to the FSA for solution.

for the economy os a whole. In the absence of a direct national attack on the problem of industrial expansion, a plethora of still-born plans may well result.[16]

Agricultural Planning Within Limits

We are thus driven back to something less than complete planning. To this extent, therefore, the importance of county planning has been much exaggerated. County planning committees may formulate their share of the nation's basic problems in terms of long-term goals, but since democratic planning loses its vitality if action[17] does not follow, year to year planning will necessarily be in more limited terms. The first limit has been set by our previous discussion: "practicable" plans for 1940 at least must not aggravate the problem in some other area—for example, by sending submarginal farmers on the march to California or to Florida or to city relief rolls. The second limit consists in the general injunction at least to unified county committees to limit their plans to the competence of existing agencies. In one case, the AAA, this limitation relates to funds: no unified county may assume any greater funds than would have been appropriated to it in any case. For other Federal agencies such as the FSA and SCS, the immediate limits are considerably wider, but the procedure for apportioning the total funds of these bodies set a measurable ceiling to plans for any one locality. Broadly speaking, this limit means that county planners will make their chief contribution to the nation's agricultural program in the form of criticisms of existing statutes and administrative procedures (that is act as sounding boards) and in the direction of securing local variations in their administration. This last purpose will, of course, be extremely useful if it leads to a tempering of bureaucratic control and promotes flexibility in the local administration of national programs. Reference will be made to this last point again.

Even within these restrictions, local planning may raise awkward questions for the administrators both in Washingron and in the

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[16] Even still-born plans may be of value, we admit, if they draw the attention of the nation to the inter-related nature of the problems of industry and agriculture.

[17] Considerable stress is rightly laid on the need for action if the democratic process in agricultural planning is to survive. Cf. Bushrod Allin in Land Policy Review Jan.–Feb. 1939, p. 5; and Mt. Weather Agreement which states *inter alia:* "If this system of co-ordinated land-use planning is to endure, farmers must see tangible results from their work."

field.[18] This arises from the fact that small changes in many counties may aggregate to important modifications of the national programs themselves. This is true of small population adjustments which in the aggregate, may be beyond the powers of the appropriate agencies to handle. Likewise, a large-scale change over from arable cultivation to grazing may relieve the grain or cotton situation and contribute to soil conservation but aggravate the problem for the beef producers and the dairy farmers. The last named will blame (and already have) the farm program for the increase in herds and resort to the Boileau amendments as a check on "sound" land-use planning.[18a] Or, again, assume that planning results in more efficient farming with consequent increases in productivity per acre. As these improved processes spread from unified county to intensive counties,[19] the aggregate effect on production volume and prices may offset the advantages of the decreased costs due to higher efficiency. No final conclusion can be reached on this point, of course, without a knowledge of demand elasticity, cost reduction and the other variables. But, it would certainly be strange if improved land-use did not result in increased productivity; this happened of course, with cotton, corn and tobacco yields per acre under the AAA. However there is no certainty that profit margins will rise as a result. Our point is merely that changes which can be safely ignored for one farm or even for one county cannot be ignored when many areas are involved. This risk will be run so long as agriculture's markets at home and abroad remain restricted and while opportunities for employment outside of agriculture limit the possibilities of eliminating the marginal producer. (This point, of course, simply repeats our earlier contention that agricultural planning might well embrace a direct attack on the problem of industrial expansion).

Another headache for Washington may arise from the attempt to meet the wishes of unified counties too closely. The AAA cannot divert funds to these counties in excess of the appropriation which

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[18] The implications of the "economy wave" in Congress are such that even "the present competence" of existing agencies may seem too liberal for planners to assume.

[18a] Consider the move of certain farm groups in the East and Middle West since 1939 to have milk designated as a basic commodity in AAA, involving production control measures on a butter fat per cow basis.

[19] Intensive counties are a stage behind unified counties but are encouraged to look forward to specific local achievements in 1940. Better farm management practices might well represent one such goal.

would be allocated ordinarily, but there may be a temptation to induce other agencies to expand their programs in these areas by diverting funds temporarily from other areas. Thus, the FSA may rehabilitate[20] on a scale not possible of application throughout the State or region; the SCS may provide technical assistance on a scale not possible generally. The point raised here is not so serious as others and, indeed, we can see very much good ensuing to Federal agencies as a result of their contact with the farmer as "planner." We are not inclined to doubt that planning will serve the farmer well in introducing flexibility in national programs in the form of variations in the regulations which are adaptable to local circumstances. Washington will have to moderate local enthusiasm in this or that district, to avoid protests from another district whose interests may appear to be jeopardized by its neighbor's plans. But such problems, even if serious, are no excuse for not planning and are frequent enough without formal county planning.

Planning On a Local Level

Planning within the framework of the present farm program and with the minimum disturbance to existing economic pattern of agriculture both reduces agricultural planning to a local level and opens up its greatest possibilities. We have been skeptical of the immediate contribution of county agricultural planning to the formation of a new national policy. Our last point reinforces our skepticism but, at the same time, contains, for us, the real merit of county planning. Planning within the limits already stressed means "planning for what can be got now," not in some indeterminable future. Planning on this basis is planning with a local color for the rigidities imposed by these limits, will vary from county to county in accordance with the urgency of local problems and the funds available. In some counties it will be possible to change the land-use pattern considerably, in others improvements in the rural mail service in 1940 might be the limit.

The September-October, 1939 issue of "Land Policy Review" contains two articles which well illustrate our argument at this

[20] Or, it may provide Tenant-Purchase funds slightly beyond the normal quota for the area. Thus, Young County has specified 369 T-P cases, but is not sure whether it will recommend 10 or 20 cases to the F.S.A. for 1940. If 5 was the 1939 quota, 20 could hardly be handled this year without protests from neighboring counties.

stage.[21] Mr. Sherman Johnson's article discusses the possible definitions of "efficient farming" and really suggests, as we have, that planners will necessarily be driven back to doing what they can, in any area, for the farmers[22] now living there. Thus, if the objective were to re-organize agriculture in terms of more nearly optimum economic units according to size, an impossible problem of relocating farmers would arise for some counties but not for others. Likewise, if the approach were through minimum family incomes in any region—say $1000—then the necessary adjustments would be possible here and impossible there within the limits prescribed by the present farm program and industrial progress. In regional terms: it may well be feasible to increase the size of the farm (and thereby more nearly approach the economic unit) in the southwest as the FSA is already doing. This is because much of the otherwise "surplus" population has already gone. This may be true of other areas in the Great Plains too—especially if planning groups can bring pressure to bear on institutional owners (government bodies included) to block out grazing areas for private lease or co-operative control.[23] On the other hand, the plan in the deep South is likely to be couched in terms of increasing the self-subsistence income from existing units through individual and co-operative effort. In other areas, soil erosion control will absorb the planners' energies, while in other, most attention will be paid to increasing real incomes in the form of better health and schooling services. In others, yet again, tenure problems or debt adjustment will be the first objects of attack. Even within States, these variations will become apparent as the work extends beyond the unified and intensive county stage—that is, as more counties are injected with the planning virus. Each county will almost inevitably concentrate on "what can be got" from local or State or Federal authorities or all three. This, for us, is the inescapable implication of Neil Johnson's statement in the second article cited above: "The problem of readjustment in Montana is not an easy one. It runs the

[21] (a) Sherman E. Johnson, Definitions of efficient farming, p. 18.
(b) Neil W. Johnson, Raw materials of Montana policy.

[22] We have, all through, assumed the term farmer to include owner-operator, tenant, cropper and laborer. The last-named group would seem especially to have been neglected thus far in planning organization. In areas where hired labor is important, the democratic process is incomplete without that group's inclusion.

[23] The County committees are advisory only, but their membership composition is so wide that a good committee's prestige would be an important influence in the policy of corporation and other institutional land owners.

gamut from the task of stabilization of a few farms in a relatively good farming area to that of relocating the bulk of the farm families in entire communities." A similar gamut exists in most States.[24]

This variation in the content of planning from area to area indicates uneven development throughout the nation on many fronts but does ensure that, within the limits stressed in this paper, a democratic attack will be made on the worst problems in each area. If planning can produce results in terms of reduced rural poverty, better health standards, soil conservation, better land-use practices in other directions, the regrassing of non-arable land, the co-operative application of mechanization to small family farms, better credit facilities, fairer tenure laws and the like, it will have paid for itself. If it adds to such achievements the improvement in local content and administration of the New Deal farm program, or merely acts as a vigorous sounding board, it will have placed a desirable democratic brake on bureaucratic control. All this despite our somewhat querulous contention that, until such time as employment opportunities open up in other fields or Congress votes even larger sums for the radical reorganization of agriculture, such "planning" will inevitably remain within the narrow limits of Departmental co-ordination and the partial relief of the more amenable problems in each local area.

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[24] And, indeed, in many counties as witness the preliminary report for Teton County, Montana.

ON AGRICULTURAL POLICY

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ONE of the most important needs of recent years in the field of American agricultural economic literature has been a scholarly treatise presenting the fundamental principles underlying a sound agricultural policy. Much has been set forth in the form of articles or addresses by farm economists analyzing some particular farm relief proposal or agricultural adjustment program in which certain basic issues have been raised, but there has been no systematic volume written on agricultural policy. Consequently, the book "On Agricultural Policy, 1926–1938,"[1] is particularly welcome, although even this, as the author points out in his forward is not a systematic treatise on agricultural policy, but rather an organized selection from his scattered writings during the period indicated in the title.

In spite of a certain amount of duplication and lack of continuity and orderliness, the author really comes to grips with many of the basic ideas which apparently underlie our agricultural relief and adjustment programs. One issue in which he challenges many of the current popular notions is "agricultural fundamentalism," the doctrine that the prosperity, health, and well-being of society depend upon a prosperous, contented agriculture, discussed in Chapter II and to a smaller degree in at least five other chapters of the book. Undoubtedly this type of duplication was in part inevitable in compiling a volume from scattered writings, but it is also evidence of the importance which the author attaches to the notion and his sincere desire to clarify some of the issues concerning the interrelations of agriculture and business.

The main theme of the book is a plea for a more realistic and sane attitude toward agriculture and its place in the national economy, rather than a sentimental or emotional one which apparently has led many into false notions about what to do "for" the farmer through public action. The author challenges the truth of "agricultural fundamentalism." He contests the view that recovery must start in agriculture, or that agricultural recovery is a

[1] Joseph S. Davis, On agricultural policy, 1926–1938, Food Research Institute, Stanford University, 1939.

condition precedent to economic recovery in general. "Recovery, like recession, may begin at almost any point in the economic structure, and progress with cumulative effects." He strongly insists that "there is a historical tendency for nations, as they advance in technique and planes of living, to require a smaller proportion of the population in farming." He even ventures to state as a law of economic history that "economic progress, broadly viewed, tends to be accompanied by a decline in the relative importance of agriculture," He concludes that "the oft-mentioned balance between agriculture and industry is wrongly regarded as a constant ratio of agricultural to total population, or of agricultural income to the total. . . . In a broad view of a nation's welfare, it appears unwise to maintain an unnecessarily large farming population, with attendant problems of excessive output of farm products or low standards of living of subsistence farmers, in order that rural living may be enjoyed by a larger fraction of the population. From the standpoint of maximum satisfaction of wants it is desirable, not undesirable, to have as small a proportion of the total energy as possible devoted to provision for essential wants, so as to leave the maximum available for leisure activities and satisfaction of wants for wholesome non-essentials."

The conclusions regarding agricultural fundamentalism, so effectively set forth in Chapter II, while perhaps shocking and disillusioning to many, are economically sound. Only when one thinks in terms of a primitive self-sufficing economy can agriculture be considered more nearly fundamental than other fields of economic activity today. The complete elimination of agriculture and the vanishing of the farmer are practically unthinkable, but the elimination of 10 or 20 per cent is not. In other words, "the aggregate importance of farm products is very great, but their marginal importance is modest." The same practical considerations determine the economic desirability of additions or reductions in the number of farmers and the supply of farm products as operate in other lines of economic activity.

The concern evidenced by many over the declining relative importance of agriculture in our national economy is based upon a feeling that the food supply will be inadequate, or that agriculture is decaying, or that civilization itself is about to fall. In the first chapter, "The Specter of Dearth of Food: History's Answer to Sir William Crookes," the fears that we may have about a food

shortage are definitely put to rest. It is common knowledge that Malthus's pessimistic interpretation of history has not been borne out by the experience of the western world since he wrote for, "Increasing population and decreasing emphasis on agriculture have been accompanied by notable increases in the adequacy of food supplies per capita."

The experience of Rome is often cited as evidence of what inevitably occurs to a society whenever the predominant interests of the country turn from agriculture to manufacture and trade. The bearing of Rome's experience on this point is a matter of considerable controversy, but at any rate in the United States and the modern world, improvements in the character of farming and the standard of living of farm workers have accompanied the declining relative or absolute importance of agriculture. Neither can it be said that it is essential for a nation, if it is to be politically and socially stable, to be predominantly agricultural. "Countries that are no longer predominantly agricultural have acquitted themselves well under the strains of a great war and a great depression. The most predominantly agricultural countries today include China, one of the most unsettled; the USSR, where has occurred the only recent revolution that has wrought fundamental changes in a civilization; and India, which is far from stable. Even in respect to food supplies, these very countries are relatively vulnerable, while most of those with low proportions engaged in agriculture are relatively secure."

The whole issue of agricultural fundamentalism should be challenged "not because there is no truth in it, but because it contains so much of error as to lead the world astray." One of the best examples of the influence of the philosophy of agricultural fundamentalism is seen in the attempts to finance construction of irrigation projects in the west in order to develop additional farm operating units to take care of surplus and stranded or migratory farm families. Such irrigation projects are referred to as "regenerative projects" because they are supposed to create new wealth and be self-liquidating. The farmers who are settled on such projects are expected to pay the costs of construction and development of these new units over a period of years. In the case of Montana, a recent survey indicates that it is possible to create some 11,000 additional farm operating units averaging 80 to 100 acres of irrigated land each, through development of existing irrigation water resources in the state.

The creation of such additional operating units apparently presupposes a satisfactory market for the products of these farms, otherwise they could not be classified as "regenerative" or self-liquidating projects. Davis states "there is no prospect that so large a farm population as we now have can earn a satisfactory living from agriculture." It is true that in the case of Montana, the 11,000 additional operating units would be just about enough to take care of the stranded and migratory farm families now in the state that have been forced off their former operating units in the state or neighboring states by drought, dust, depression, and insect pest ravages. But should these 11,000 families be settled on these 80- or 100-acre irrigated farms? Should they be established on a commercial farming basis, and if so, where will their products be sold? Under our present economic and social organization, we have a surplus of many agricultural products and control programs are in effect on several. Should these units, therefore, be established on a subsistence basis and are any large numbers of Montana farmers or those in other states willing to restrict themselves to a subsistence basis?

If agriculture is really more basic or fundamental than other lines of economic activity as many believe, then these farmers should be reestablished on these newly developed irrigation tracts because agriculture being so fundamental to society, a price should be paid (if necessary through benefit payment programs) for the products of these new units which would make it possible for these farmers to pay the necessary construction and development costs. But if agriculture is not fundamental in the sense commonly held by the proponents of the doctrine of "agricultural fundamentalism," and a declining farm population in light of the trend of technological advances and farm operating efficiency is desirable, or at least not to be feared, why should these additional farm operating units be established?[2] Will not farm price raising programs be even more necessary to bolster agricultural prices to maintain the larger number of farmers on a satisfactory basis, or subsidies in the form of public grants be essential to cover at least a major portion of construction and development costs? If there is a suffi-

[2] The creation of new farm operating units on a commercial basis should not be confused with the development of irrigation resources in the western states for producing supplementary feed supplies for livestock and, by making available a more certain feed supply, more effectively stabilize and insulate the existing farm and ranch operating units against the disastrous fluctuations that result from great variations in weather and prices.

ciently strong demand for the products produced by these new units to pay satisfactory prices, would such subsidization through price raising programs or public grants be necessary? And, if not, is it a wise public policy to be undertaking such activities? The answers must be unequivocably "No" unless there is some special reason why it is better for the nation as a whole to put these farmers on the land than to have them go into some other branch of economic activity.

The next question is what to do with these surplus farmers. There are now large numbers of unemployed. Does this mean that we should give special aid to agriculture to prevent more movement into other occupations than those can absorb? Davis admits frankly that:

> Even the most advanced nations have not satisfactorily solved the problem of smoothly readjusting the utilization of labor and capital so that available resources may be continuously employed. Yet there exist, even in the face of idle plants and unemployed millions, outstanding deficits in the satisfaction of human wants, notably in the fields of housing, transportation, education, recreation, and art in multifarious forms. Even with present standards of desire, these deficits are so large that it is absurd to assert that there is not enough need for products and services to employ all who wish to work, provided their labor is directed to the things that people want and will work or pay for. The danger of overpopulation, in the strange new sense that the work of only part of the people will be needed to satisfy all demands of the whole, is a figment of the imagination. With the miracles that technological advance brings, the only excuse for unemployment is that society has not yet effectively learned to utilize available resources in satisfying human wants.

Davis apparently believes that the field of the really large, significant potential frontiers for absorbing surplus farmers and workers in the future is not in agriculture, but in industrial and business fields engaged in producing products to satisfy human wants for "wholesome non-essentials." In other words, human ingenuity is the only limitation upon the expansion of activity in these lines, while in the case of agriculture there are much more definite limits which come into play quickly, the best example of which is the physical limitations of the human appetite for food. To follow Davis's reasoning, agricultural workers should recognize this situation, forget their "agricultural fundamentalist" bias, and work toward the expansion of activities in industrial and business lines which can effectively absorb the large numbers of surplus workers and surplus farmers.

One cannot help wondering, as one reads the very logical and well-written arguments advanced by Davis, just how this great expansion in the "wholesome non-essentials," which will absorb both the surplus city workers and surplus farm folk, is to be brought about. Will such developments occur normally in a capitalistic society in the search for money profits? Or, will such developments have to be "inspired" through public programs with consequent heavy tax burdens and socialization of business profits? If normally through private business channels, why have not more of the millions of unemployed and thousands of surplus farmers found some adequate economic opportunities in these fields during the past decade? If publicly, is this really a field for legitimate public endeavor if subsidization of farmers is not?

Unfortunately, the author does not attempt to enlighten us on these perplexing matters. This is not his purpose. His real contribution seems to lie in being a stimulating critic and in trying to create a more realistic and wholesome approach in determining public policies, particularly those dealing with agriculture.

But assuming that the necessary economic opportunities in these fields other than agriculture do develop or are developed by one means or another to take care of the surplus workers and surplus farmers, will not the declining relative importance of agriculture involve important social losses to the nation? Have we as a nation really had much prolonged experience as a predominantly urban, non-farm population? Has any nation? Is there any proof or acceptable evidence that a highly urbanized society in which a relatively small proportion of the total population is engaged in farming can exist on a satisfactory basis for any great length of time? On the other hand, is there any significant evidence that it cannot? In other words, is this not a relatively new, untried experience in the history of nations? However, the fact that the trend of population movement for several decades past has been toward cities with a continually declining proportion on farms, puts the burden of proof on any one who takes the view that a relatively larger farm population is desirable.

There is no conclusive evidence to indicate that without subsidization our farm population will decline to a level below that necessary to assure an adequate supply of farm products, or to a level below that necessary to furnish a sufficient number of youth to prevent disastrous effects upon our major social institutions.

(It is a well-known fact that urban areas have lower birth rates than farm areas and rely upon the farm areas to supply people to maintain or increase their populations.) In a population as large, as mobile, and as heterogeneous in backgrounds as ours, it seems reasonable to believe that through the operation of competitive price forces our farm population will be sufficiently large to assure us an adequate supply of farm products. Moreover, the author believes most of the real advantages of farm life plus many that are erroneously imputed to it, can be realized for a significant portion of our population through increasing the extent of rural and semi-rural residence without combining it with more than a minimum of farming activity. But it might also be wise to consider the possibility that allowing competitive factors to work unrestrictedly in agriculture without any relief or benefit payments program might deplete rural human and other resources below long-run desirability and the long-run competitive equilibrium. In other words, the waste of depletion and then of regeneration might be worth the present agricultural subsidies.

We should not forget that most of the above adaptations or adjustments are possibilities, not realities, at the present time. But if they are to be made realities, considerable changes must be made in our present agricultural policy and programs. The author indicates that he is opposed to a policy of so-called "parity prices" for farm products and "parity income" for the farm population, and to stabilization or control of agricultural production or prices. A considerable portion of the book is devoted to a careful criticism of the AAA and related farm programs. The implication is that such policies will keep a larger number on the soil than would otherwise be there because the "parity" levels which will be acceptable to agriculture will be uneconomically high and will consequently tend to lower the average level of living of the farm population in the long run.

Even though several other important groups in our economy may practice output control, price maintenance and rationing of market outlets which without doubt enable greater numbers to continue in these lines of economic activity than would ordinarily continue, there is no approval in the volume justifying the government's effecting a similar program for agriculture. The production conditions peculiar to agriculture are not considered sufficient to justify any such governmentally administered "equality" program.

Can it be that price maintenance or production control is all right if it is done through private action, but wrong if done through public action? Or, should national policy be designed to break up such monopolies or semi-monopolies or through some other means restore greater competition in all lines more comparable with the degree of economic competition that exists in agriculture? The author does not enlighten us on these matters, but should we as agricultural leaders give up some of the bargaining equality that has been achieved for agriculture before some specific results are accomplished to restore more effective competition in these other fields of economic activity?

The argument that two wrongs don't make a right and that agriculture's influence in bringing about real economic and social progress will be greatest by keeping its own record clean and operating on a freely competitive "natural" basis, does not sound very convincing. In spite of agriculture's good example for decades when no agricultural output control programs were in operation, big business followed a controlled output program. Certainly it is decidedly academic and naïve to argue that the distribution of the national income to the various groups in society is today determined by the free play of economic forces, even eliminating the recent activities of the federal government to secure "parity prices" or "parity incomes" for agriculture.

The volume may disappoint many readers in not containing more specific details regarding an economically sound and socially desirable agricultural policy. It may be considered somewhat academic and supercritical by many who are on the firing line actually engaged in administering some of our present agricultural programs, but it is an exceptionally stimulating book which helps to create a more wholesome and realistic attitude toward our agricultural problems. It furnishes the basic philosophical reasoning so vital in the long run in formulating a permanently sound agricultural policy. Let us hope that this volume will call forth sound proposals and effective efforts in the years ahead in the direction of developing specific policies and programs to absorb the millions of unemployed and surplus farmers in the "wholesome non-essentials" (non-agricultural activities) as the author believes can be done.

Failing this, there should be a very fine opportunity for the rural sociologists to get a strong following for a new kind of rural cul-

ture and a drift toward the soil as a means of solving our most serious economic and social problems. They argue that in the farm areas primary group relationships as contrasted with secondary in urban life predominate, and that these primary relationships are essential for developing maximum individual welfare and personality which are so necessary for the operation of a democracy. Many apparently are already of the opinion that sufficient time has elapsed for human ingenuity to develop the proper policies to solve our problems in the "wholesome non-essentials," that the sorry record of recent years indicates it is impossible to accomplish our goals this way, at least on a private profit basis, and that we should work now toward establishing a strong rural culture and encourage increasingly large numbers to live on the soil. Others feel such views are unfounded and prematurely drawn. But regardless of whether we agree with the principal conclusions of the author or not, a careful reading will at least loosen up some of the cobwebs that might have started to develop in some parts of our thinking apparatus in the rush of routine details.

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NOTES

FEDERAL-STATE RELATIONSHIPS IN AGRICULTURE

THE development of governmental agricultural programs has raised many new questions regarding the relationship of land-grant colleges and the U.S.D.A. Recognition of this led the Iowa State College to appoint a committee to study this matter and report its conclusions. The first report was published in June, 1938, as a bulletin bearing the title "The Role of the Land-Grant College in Governmental Agricultural Programs." A second report was published in December, 1939, under the general title, "Federal-State Relationships in Agriculture," with a more specific subtitle, "Education for Action Programs in Agriculture." The Iowa State College is to be commended for taking this method of formulating institutional policy and for making the results available to others.

The broad conclusion of the initial report was that the college should assume no executive responsibility for action programs but that it should carry on the education and research relating to such programs. It was suggested that there might be a place for "a kindling of favor and enthusiasm" and this job was assigned to the program sponsors although it was acknowledged that the drawing of a line between such activity and education was no easy task. The first report was a distinct contribution to the thinking about and understanding of the problem. The second report reaffirms the conclusions of the first but beyond that its place seems less clear. It is stated that "In all planning programs we are definitely claiming a part." The emphasis placed in the second report on the need for cooperation may suggest a feeling on the part of the committee that the present situation in this respect is far from perfect. If this is its feeling, the committee undoubtedly is not alone in its attitude.

The committee sees no "deep distinction in principle" between current action programs and earlier ones such as grasshopper and tuberculosis control. Perhaps the differences are not in principle but must it not be conceded that there are some very real ones? The committee's reference to "kindling of favor and enthusiasm" is suggestive of an important one. Question might well be raised as to the real need for such activity on the part of public agencies. Is a public agency justified in engaging in propaganda or should it

confine itself to information of a truly educational nature? There are indications that such activity may not stop at selling a program but may lead to activity, at least indirectly political, to maintain a given administration in office in order to assure continuance of the program or retention of its administrators. No parallel situation developed over grasshopper control. Can land-grant colleges easily dissociate themselves in the public mind from such efforts? The difficulties arising from this situation may be increased because individuals involved may not always appreciate how closely some of their performances may border on the political. Friction also may easily develop, because the arguments used to justify a program may not always run parallel to the material presented by land-grant institutions in their educational work. The process of making up a man's mind for him differs from that of supplying him with as nearly complete a picture as possible of facts for his use in arriving at his own decision.

Administrators are human and among them are individuals who may not always take kindly to the raising of questions regarding their programs. Research must be free to raise such questions if it is to do its job. This fact does not make the wished-for division of labor and cooperation easier of attainment; for example, an administrator may advocate a certain method of financing a program because it may give greater assurance of continuance. Supposing, land-grant college representatives point out that the method may have an undesirable effect on the distribution of income. Will such information be welcomed under the circumstances?

Were there not some circumstances surrounding the location and organization of the four regional laboratories by the Department of Agriculture which may suggest that the place of agricultural experiment stations and the need for cooperation—fittingly emphasized in the Iowa reports—have not received full recognition by Washington administrators?

These questions are not raised to disparage the excellent reports of the Iowa committee. They do suggest, however, the existence of a more serious problem than the two reports to date have delineated. The issues need to be faced, not ignored. The facing needs to be that of calm, dispassionate reasoning and weighing of facts which will point the way to improvement. Land-grant colleges generally should follow the lead of Iowa and give specific attention to the formulation of constructive policies for their guidance. In

so doing they will do well to keep in mind their duties and rights in education and research as well as the importance of maintaining their integrity so well stressed by the Iowa reports.

O. B. JESNESS

University of Minnesota
RECEIVED FEBRUARY 29, 1940

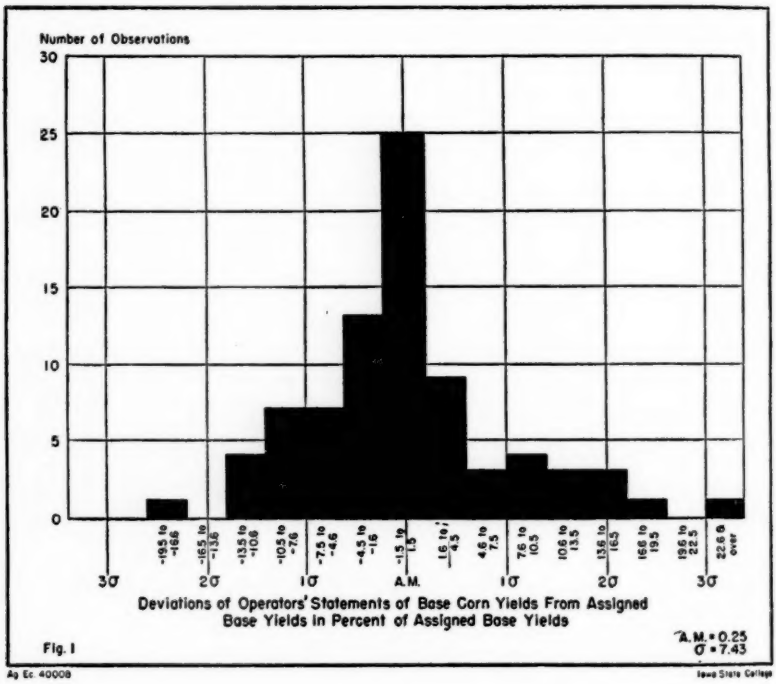
MEMORY ERRORS AS THEY AFFECT SURVEY DATA

MOST agricultural economic data gathered by means of farm surveys are subject not only to errors of sampling but also to errors in reporting, some of which arise out of the forgetfulness of the farmer being interviewed. Errors appearing because of the failure to remember are independent of those resulting from sampling and may be classed as enumerational bias. The latter are probably of several types. To correct the errors classified as enumerational in origin it will be necessary to ascertain empirically the nature and magnitude of these deviations. Little, however, is known as to the degree to which such errors affect the results obtained from survey data, for checks on these errors are not readily available. One type of enumerational error is that which comes into play when information on past experience must be recalled by the person being interviewed and which consequently involves errors of memory. Most items appearing on farm management survey schedules are subject to this sort of error, since, unless the farmer consults his records, he must recall his receipts and expenditures, inventories, farm practices, and other information relative to the operation of his farm.

In a farm management survey conducted during November, 1939 by the Agricultural Economics Subsection, Iowa Agricultural Experiment Station, data were obtained from 82 Iowa farmers, selected at random from the 200,000 farmers in the State, relative to the base corn yields which had been assigned by the county AAA committee to the farms which these farmers were operating in 1939. These base yields are important to operators who participate in the AAA program only in that they are an index of the past corn yield performance of the farm and consequently are used in determining the per acre benefit payments. They are not, however, an imporant factor entering into the management of the farm. The farmer usually cannot recall the figures accurately when questioned. The yield figures reported by these 82 farmers were

checked by obtaining the base corn yields which actually had been assigned to each of the 82 farms by the County Agricultural Conservation Committee.

Errors in reporting base yields were expressed as percentages of the actual base yields assigned to the farms. Of the 82 farmers 35 stated figures within 2.5 per cent or less (this is equivalent to an average error of one bushel or less) of the actual yield. Such



errors probably resulted largely from expressions in round numbers rather than in tenths of bushels. The standard deviation of the distribution of these errors was 7.43 per cent (see figure 1).

Since the deviations of the reported base yields from the actual base yields tend to distribute themselves normally, one might expect the arithmetic mean of the base yields obtained from interviews with the operators to be approximately the same as that of the base yields actually assigned to these farms by the county committees. This hypothesis is verified by the fact that the mean of the base yields assigned to these 82 farms was 38.9 bushels per acre, while the average of the base yields obtained by interviews

was 39.0 bushels—a deviation of only 0.25 per cent from the mean of the actual values.

The results which have been obtained from this test seem to indicate that errors because of forgetfulness may be distributed normally when there is at hand no motive for reporting either too low or too high figures. Thus, although values for individual farms cannot be treated as accurate in themselves, means may be as dependable as if the data were reported accurately by each farmer.

OSWALD BROWNLEE

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RECEIVED JANUARY 20, 1940

MARKET-SHARING IN THE PACKING INDUSTRY*—A CORRECTION

AN AMBIGUITY in the above-mentioned article has been brought to the writer's attention, resulting from failure to emphasize a shift in hypothesis as to freedom of the "followers" to expand their percentage of total purchases at the expense of the price-leader. In the discussion of the relations of the dominant firms to each other (p. 235 and the first complete paragraph on p. 236) it is assumed that the followers are "entitled to" a certain maximum percentage of total purchases, which they may drop below but are not allowed to exceed. In the discussion of the relation of the dominant group to the outsiders (beginning at the middle of p. 236), the latter as followers are supposed free to increase their purchases relative to those of the combined dominant firms as much as the price policy of the dominant firms may make profitable.

Unfortunately a verbal slip at the end of the last complete paragraph on p. 235 implies a shift at this point, rather than later, as intended, to the hypothesis that followers may raise their percentage. The writer meant to suggest that they may fail to take all of their "fair share." The last two sentences in the paragraph should read:

> The less-efficient firms will find themselves accepting the leader's price. At this price they may conceivably choose to buy less than their "fair" share, in which case the leader will gain a growing percentage of the market.

The writer regrets this ambiguity and only pleads the difficulties of condensing a rather complex theoretical analysis within the limitations of space imposed in the original article.

WILLIAM H. NICHOLLS

Iowa State College

* JOURN. OF FARM ECON., Feb. 1940.

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REVIEWS

The Structure of the American Economy. Part I. Basic Characteristics, Gardiner C. Means and Staff, National Resources Committee. Washington, D. C. 1939. Pp. viii+396. $1.00.

This is a document of first rate importance, there can be no doubt about that. The last few years have been especially rich in public papers dealing with a wide variety of matters, and this one easily earns a front shelf in the collection. Dr. Means and his associates have undertaken to assemble and correlate the main facts of the whole process by which production is organized to need. This is a large task and in many ways a new one. Our entire research tradition is to amass a large amount of information about a small sector of economic activity. Then, recognizing that this does not always improve the picture of the system as a whole, we dare someone else to synthesize or to "coordinate" the results. Means has accepted the dare and he has shown that something can be done about it.

The substance of the study falls into eight parts which (very briefly) are as follows: a survey of consumer expenditure based on the recent studies of Miss Kneeland for the National Resources Committee and titled, perhaps somewhat inaccurately, the Structure of Wants; a brief survey of the manpower and natural resources available for production; a picture of the geographical distribution of agricultural and industrial production; a survey of the "functional" components of economic activity, i.e., the distribution of income production between agriculture, manufacturing, trade and the like, between domestic and international trade, and between durable and non-durable goods production; the supply and flow of money through the economy; the size and character of the firms or "administrative units" in the present day economy and the degree of market concentration in different industries; the behavior of prices in different markets especially in relation to cyclical fluctuation in demand; and, finally, an effort to find the locus of control or decision in the vast administrative units and interlocking groups of units which, as the study shows conclusively enough, go a long way toward comprising the modern economy. No fewer than eighteen appendices, something over half the volume in total pages, supplement and amplify the body of the document. The appen-

dices by themselves are a rich mine and one which economists and statisticians will work for many years to come.

There is really far more here than can be commented on in a few paragraphs. Aside from its task of synthesis the study provides new information on important aspects of economic organization. Gardiner Means has already taught us much of what we know of the scope of large scale corporate enterprise and this study amplifies and brings up to date his earlier work with A. A. Berle. This study covers the large financial as well as non-financial corporations, and is supplemented by a preliminary but revealing study of the lines of interconnection between the major corporate units of the country. One section in this part of the study should put an end to purely speculative discussion among economists concerning the degree of concentration among sellers in the present day industrial market. The authors have gone to the Census schedules to tabulate the share which the largest four and the largest eight concerns have in each of some 250 industrial markets. In spite of some shortcomings, which the authors scrupulously list, the result is a good picture of market organization. The result, it may be noted, does not look much like the kind of market which has long been honored by the textbooks.

The most important contribution of the study is this new light which it throws on the scope of corporate enterprise and the organization of the modern industrial market. In certain other places it is less successful. The chapter on the flow of money in the economy suffers because it is a static description of a process where dynamics are all-important. The channels of money payments are not especially significant in comparison with the changes in the flow through these channels. Thus changes in the volume of money going into investment goods and the things determining this volume are considerably more important than the direction and size of the flow at any one time. This is not an adverse criticism of the study; it is merely a statement of necessary limitations in its scope. One could quibble with some of the subject matter, however. The chapter appears to assume that all money going into the purchase of capital goods is derived from saving of some sort or other. This is certainly ambiguous when applied to conditions of partial employment.

More serious fault may be found with the chapter on prices although my criticisms of these exhaustive analyses may be some-

thing of a minority report. The first part of the chapter deals with the adjustments of individual prices to changing cost conditions and thus with the effectiveness with which prices control the distribution of resources to various industries under changing conditions. Here the study is on firm ground. The second and larger part of the chapter deals with the differential behavior of groups of prices in depression—with the tendency of the price structure to break into flexible and inflexible sectors in the face of a widespread shrinkage in demand. Simply as a description of what has happened and why it has happened the authors have done an admirable job. But they have focused their attention on the differential flexibility or "depression sensitivity" of prices because they consider it to be an important factor in the low level of employment and the underutilization of resources of the past decade. This much they say and no more; they do not explain the relationship which they assume to exist between price behavior and the level of employment. In my view price disequilibrium has been over-worked as an explanation of cyclical instability and under-employment and the corollary, that the level of employment can be restored through restoration of price equilibrium, is a blind alley. A detailed analysis of the nexus between price behavior and the level and stability of economic activity, must necessarily be theoretical and somewhat personal to the individual author. Such analysis may have been considered out of place in this report. Still, since this nexus between price behavior and employment is assumed, it is fair to ask that it be explained.

Notwithstanding these comments, this is a piece of work of fundamental importance. Even the less kindly critics, if there are any, will find their copies becoming dog-eared as the months pass.

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Government and Economic Life, Leverett S. Lyon, Myron W. Watkins and Victor Abramson. Washington, D. C., Brookings Institution, 1939. Pp. xvi+519. $3.00.

The broadly accepted view in the United States has been that our economic life is and should be primarily one of individual initiative and voluntary organization. There has been a decided drift, however, toward greater governmental participation in these affairs, and this drift appears to have accelerated recently. In this

volume the authors have carefully traced the origin and the evolution of those activities of the government designed to facilitate the organization and operation of economic life by private individuals. Consideration of the direct government participation in productive activities has been reserved for a subsequent volume.

The discussion has been divided into two broad parts. The first deals with the functioning of the government in the implementation of private enterprise, and the second discusses the operating rules or regulations under which the system functions. One of the important ways of implementing private enterprise consists in the creation and maintenance of certain institutions. Thus, the organization of the business enterprise depends upon the laws of the state. In industry and trade the corporation is the more important of these forms. Not only does the formation of these enterprises need to be provided for but also bankruptcy and reorganization procedures are essential for discontinuing or continuing ailing organizations. Another implementing form is the provision of patent rights, with their temporary monopolies, as a reward for inventive contributions. A chapter is devoted to each of these and the broad issues now current with respect to them. A much broader form of implementation is that provided by the money mechanism, and the work of the government in the provision of knowledge. The latter includes such things as the creation of standards, the production of original information through various forms of research, and the collection and dissemination of knowledge.

Rules or controls must also be imposed by the government to provide for a proper functioning of the economic system. These have been considered in four categories. The first are those designed to maintain competition among business enterprises, which involves an examination of the pressing problem of monopoly controls. The second group is composed of those designed to establish a plane of competition by setting up and enforcing certain ethical standards of market conduct. An important example here is the work of the Federal Trade Commission. Next there are the regulations concerning concerted action by laborers. Public policy has not called for the maintenance of competition among laborers to the same degree as among businessmen. The issues are so broad and current that four chapters have been devoted to this phase of regulation in contrast to the single chapter for each of the others. Finally, there are the regulations with respect to terms and conditions of employment.

The general plan of the book has been to show the historical development of each of these phases as far as it is essential to an understanding of the present position. The present situation is then examined and finally the current issues and proposals for change or reform are discussed. The book is excellent and one cannot read it without being impressed with the fundamental importance of the issues we now face in the relationship of government to our economic life.

WARREN C. WAITE

University of Minnesota

A Policy for British Agriculture, Lord Addison of Stallingborough. London, Victor Gollancz, Ltd., 1939. Pp. 304. 7*s*. 6*d*.

This is a little British book by an elderly Labor Peer with a varied past and what seems to him a glorious vision.

Christopher Addison's non-political career was in anatomy and medicine, as university professor and editor. As a Lloyd-George Liberal he entered Parliament in 1910. During the next twelve years in the House of Commons he rose, in the course of the war, to be Parliamentary Secretary first to the Board of Education and later to the Office of Munitions (!), and then became successively Minister of Reconstruction (1917), President of the Local Government Board, and first Minister of Health (1919–21). Returned to Parliament as a Labor member in 1929, Dr. Addison became Parliamentary Secretary to the Ministry of Agriculture and then Minister of Agriculture and Fisheries in 1930–31. With such a background Lord Addison anatomizes Britain's agriculture, appraises its lack of health, and eventually prescribes a regimen with little regard for economic considerations in the usual sense.

In Part I he somberly reviews "the present state of affairs on the land, the conditions of life and of those who work upon it, and the reasons for the continued decline in Agriculture." Then he throws down "the challenge to adversity." In Part II he outlines the action required "to provide the people with Plenty on just terms, and at the same time enable the home producer to make his contribution to the provision of that plenty under self-respecting conditions." In Part III he develops various aspects of the program of development.

The proposed program calls for national ownership of the land, far-reaching controls and subsidies, and elaborate administrative

machinery. He would have a Ministry of Agriculture and Food Supplies, the head of which would be Chairman of a highly powerful National Agricultural Commission; a number of powerful Boards, among other things for import controls and price stabilization; and County Committees of an important character. He wants large-scale farming corporations established, as well as numerous demonstration farms. He seeks a striking expansion in arable acreage, rotation pasture, and home production, especially of the "protective foods."

To the present reviewer, the value of the book lies in its revelation of the ideas that such an author holds, rather than in its significance as a discussion of British agriculture or desirable public policy.

J. S. DAVIS

Food Research Institute
Stanford University

History of Prairie Settlement and "Dominion Lands" Policy, Arthur S. Morton and Chester Martin. Toronto, Macmillan Company. Pp. xviii+571. $4.50.

This book is one of the nine volumes comprising the Canadian Frontiers of Settlement series. In reality it is made up of two separate volumes, "History of Prairie Settlement," by Arthur S. Morton, and " 'Dominion Lands' Policy," by Chester Martin. As might be expected in two contributions dealing with settlement and land policies in the same area, there is a certain amount of duplication, but whereas Professor Morton has specialized in the history of settlement, Professor Martin deals with settlement only as the result of land policies.

Professor Morton has devoted more than a quarter century to the study of the history of the region now comprising the Provinces of Manitoba, Saskatchewan and Alberta. He has been fortunate in gaining access to the Archives of the Hudson's Bay Company in London, England, as well as to the official archives and storehouses of historical documents in Canada. Moreover he has lived with the people of the West and has travelled extensively during the period when much of the development of which he writes was taking place.

Since the region under study is one in which agricultural pursuits predominate, it might be expected that any volume dealing

with its history would feature agriculture; the History of Prairie Settlement is really the history of Western Canadian agriculture (prairie region) with an introduction dealing with exploration and fur trade.

The search for a "Northwest Passage" to the rich marts of Asia led indirectly to the discovery and development of Western Canada. Some early explorers passed to the north of the mainland through Arctic Seas, while others, entering by the St. Lawrence route or the Hudson's Bay, sought an inland passage. A succession of navigators led by Henry Hudson, 1610, explored the Bay to which his name was given. In 1670 the search took on a new form when Groseilliers and Radisson penetrated into the Cree country in search of furs. Having run into difficulties with the French authorities in Quebec, and receiving no consideration from officialdom in France, these explorers turned their attention to the British; the Company of Adventurers of England trading into Hudson's Bay, otherwise known as the Hudson's Bay Company, was the outcome.

The Charter of the Company, granted in 1670, gave it not only a monopoly of the fur trade but control of all rivers, lakes and straits that might be discovered beyond Hudson's Strait. The right to colonize was also conferred—perhaps one should say was made obligatory—the colony to be known as Ruperts Land. The opening of a passage to India and China was also envisaged. For two centuries the Hudson's Bay Company was the dominant factor in Western Canada and as a commercial concern and land company still occupies a position of prominence.

Some of the significant developments in the history of prairie agriculture referred to by the author include the unsuccessful attempt to grow garden vegetables at James Bay, 1674, the apparently successful attempts at Fort St. Louis (Kinistino, Saskatchewan), 1753, and on the Peace and Red Rivers in 1788 and 1803 respectively; the establishment of the Selkirk settlement near what is now Winnipeg in 1812; surveys by Palliser and Hind, 1858, which condemned the prairies as arid regions and sent settlement northward; surrender by the Hudson's Bay Company of its Charter to Ruperts Land, 1870; report of agricultural possibilities following a survey made by John Macoun during a period of high precipitation which encouraged settlement of the open prairies; the Land Act of 1872 which provided free homesteads; assisted settle-

ment; encouragement of national group settlements; the building of the Canadian Pacific Railway; the formation of the several provinces; the development of early maturing varieties of wheat and the extensive organization of farmers marketing associations.

Professor Morton's enumeration of experiences during the many periods of drought and grasshopper depredations and his recording of the development of early maturing varieties of grain that have reduced the number of days required to produce a crop of wheat from about one hundred and forty in 1812 to around one hundred and five in recent years, provides interesting data for both the meteorologist and the agriculturist. His descriptions of group settlements and their experiences are particularly revealing.

"Dominion Lands" Policy by Professor Chester Martin, Part II of the text, is the most complete record of Canadian land settlement experiences that this reviewer has seen. It contains a wealth of historical data and authenticated records. The treatment is chronological, beginning, as was the case with the "History of Prairie Settlement," with the land settlement activities of the Hudson's Bay Company. The author discusses the Railway Land grants at considerable length, also the school lands policy. The free homestead system with its origin in the United States and adaptation to Western Canadian conditions, the pre-emptions and purchased homesteads policy, early defects and later results, provide the background for a very complete discussion of Canadian land policies and their effects on the agricultural and general economic life of Canada today.

Later chapters deal with the controversial subject of natural resources and their effects on Dominion and Provincial relationships.

The authors of this volume have succeeded in presenting historical facts in an exceedingly interesting manner. The reader will find it as interesting as a novel but as authentic as extensive research and documented evidence, combined with painstaking effort, can make it. Without doubt this book will become a standard reference on Canadian historical and agricultural development. It will prove invaluable to students of agricultural economics.

J. F. BOOTH

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Public Policy: A Yearbook of the Graduate School of Public Administration, Harvard University, 1940. Edited by Carl J. Friedrich and Edward P. Mason. Harvard University Press, Cambridge, 1940. $3.50.

This book is the first of what promises to be a series of annual volumes on Public Policy by the Harvard School of Public Administration. The unifying thesis of the book is public policy in relation to industrial organization and control. Several of the articles relate either to the recent monopoly investigation by the TNEC or to the revival of activity under the Federal anti-trust laws. Each of the eleven contributions attempts to state the issues in some special phase of policy in the light of contemporary research and theory. While no one of the contributors deals principally with agricultural policy, several of the articles will be of interest to agricultural economists.

Especially timely is Professor Mason's analysis, in "Price Policies and Full Employment," of the change in interpretation of anti-trust laws. The current tendency is to shift from the older toleration of non-predatory price policies of independent firms to the general view that price fixing as such is evidence of violation. While the later interpretation is not inconsistent with the earlier, it does raise fundamental questions regarding the consequences of price control for the functioning of the entire economy; all private power cannot be eliminated. One of Professor Mason's main concerns is to formulate the issues involved in developing standards of judgment by which public policy may be guided in this area of imperfect competition. Professor Wallace's contribution "Industrial Markets and Public Policy," carried much the same point of view; it includes criticisms and evaluations of the recent studies in this field by Burns, Ezekiel, Nourse and Drury, Simons, Means and Chamberlain.

Professor Friedrich presents an analysis of problems of administrative responsibility involved in the current attempts to shift from the earlier negative conceptions of the function of the state to the emerging ideal of a social service state. He cites the operation of the AAA as indication of how public policy is necessarily formed, in part, as it is executed. Mr. Feller calls attention, in a refreshing way, to some of the advantages of diversified approaches to public regulation. The singling out of particular articles for comment is, of course, a matter of interest. The enduring value of the volume

will likely be found in the fact that these are the issues of Public Policy as they appear to competent scholars in 1940.

KENNETH H. PARSONS

University of Chicago

American Husbandry, Harry J. Carman, Editor, New York, Columbia University Press, 1939. Pp. xli+582. $5.00.

This edition makes readily available "American Husbandry," which was originally published anonymously in London in 1775. It provides a comprehensive source of information on agricultural practices in Colonial America from Nova Scotia to the Leeward Islands. The most detailed and probably most accurate descriptions of colonial agriculture in "American Husbandry" are those concerned with Pennsylvania, Virginia and Maryland, and South Carolina. Chapters on other colonies, however, show that the author had traveled extensively and had observed carefully the crops grown and the systems (or lack of system) used in caring for them. The livestock and the equipment of the colonial farm, how the colonists lived, what they ate and how they entertained themselves are all discussed at length.

Farming in Pennsylvania at the time was shown to rest on extremely cheap land and scarce labor. The author of "American Husbandry," evidently accustomed to the more conservative farming methods of England, reproaches the settlers for buying the greatest possible amount of land; then clearing only small acreages and farming in a "slovenly" manner. In the neighborhood of Philadelphia, "the first settlers, with the usual foresight of the Americans, destroyed the timber, as if it was impossible that they should ever want any" in future years. "Wheat is the grand article of the province," but "they sow a piece of land with wheat until it will bear wheat no longer" and then abandon it to weeds until the land has had an opportunity to recover. The settler who has but little capital must face many difficulties at first; but as soon as he has accumulated "horses to work, and cows that give milk and calves, he is then made, and in the road to plenty." Investments in livestock and equipment may be expected to earn 15 to 25 per cent, and once established the planter can live considerably better than a farmer of equal wealth in England, and at the same time, "enlarge his improvements gradually as suits him." Small wonder that that colonies were growing by leaps and bounds!

The descriptions of the highly exploitive and rapidly expanding agriculture of the Colonies in the middle of the 18th century make very interesting reading and suggest that the process of "soil mining" of which we have lately heard so much, was being carried on along the eastern seaboard nearly 200 years ago even more vigorously than in our newer regions in recent years.

Any scholar who is interested in the history of agriculture in America should have this book in his library.

J. A. HOPKINS

Iowa State College

Land Utilization in Australia, S. M. Wadham and G. L. Wood. Melbourne University Press, 1939. Pp. 360. 21 s.

A continent of 3 million square miles is now supporting about 7 million people of which 36 per cent are rural and 46 per cent live in metropolitan areas. It is difficult to realize that the Commonwealth with a population approximately that of Ohio has two of the 36 cities of the world with more than a million inhabitants. It is perhaps natural to ask why Australia cannot support a population of 100 million as is popularly supposed and why policies are not set in motion to achieve this population. The authors make clear that the reasons for the present status of land utilization and the limits to further expansion of the agricultural area are physical, economic, political and sociological. Today crop and orchard lands occupy only 3 per cent of the Commonwealth, forest 2 per cent, pasture —including extensive grazing—55 per cent, leaving 40 per cent as waste. Few regions of the world have such sharp limitations set on land use by moisture conditions, not only because of low annual precipitation but also because of variability in the rainfall and high evaporation. Topography, soils, and the high cost of clearing are other factors emphasized by the authors. Furthermore, the areal distribution of the usable land is such that "the problem of transport is an overwhelming factor in the scheme of development" (p. 5). In other words, Australia like a large part of the United States and Canada suffers from excessive space, a sort of "geographical elephantiasis."

Another geographic factor is the distance from the markets of Europe. One of the products suited to the physical conditions of Australia and suitable for long distance transportation is wool. Three chapters are devoted to this important commodity of which

the Commonwealth produces 38 per cent of the supply entering the world trade. "For Australia, more than any other country, changes in land utilization will depend upon changes in the demand for a single staple commodity. What silk is to Japan, wool is to Australia" (p. 145). Hence the emphasis by the authors on possible changes in the consumption habits and the decline in the rate of population growth in Europe.

Separate treatment is given to wheat, meat, dairying, and the minor products such as sugar and cotton. The historical development, the use of land for these crops, physical and economic conditions, and the governmental measures inaugurated to "cure" conditions during periods of maladjustments are given adequate consideration.

Between 650,000 and 750,000 acres are irrigated annually, a small portion of the area of the Commonwealth; nor do the authors anticipate any appreciable increase. The technical failures and uneconomic developments of this form of reclamation are similar to those of the United States. The story of the forests sounds familiar—uneconomic destruction, fires, accelerated run-off and erosion plus a reduction of the forest areas below the requirements of the population. Australia is now importing 50 per cent of her forest products.

The politico-economic factor in Australian land utilization is the fact that she has a £650,000,000 overseas debt "a tie that binds both Britain and Australia firmly within the imperial economic system." "So long as the obligation is acknowledged, so long must Australia concentrate her efforts upon the export market, and so long will Britain be unable to take any steps which will make the payment of interest in Australian exports more difficult. The essential compromise is, therefore, to balance ability to pay with capacity to receive" (p. 345). In other words, Australia cannot, even if she desired, become self-sufficing nor can the majority of her farmers become self-sufficing. Her land utilization, extensive and intensive is "determined by price levels which reflect the whole complex of world economy in relation to producers' costs" (p. 355).

Finally the sociological question of the standard of living, the white Australia policy—"white" even to the point of discrimination against the southern Europeans—though not treated in detail, nevertheless are factors in the utilization of the land and population policies.

The book is a very interesting, well written, and well documented work of great interest to all Americans interested in land utilization problems. It is issued by the Australian Institute of International Affairs as a National Group of the Institute of Pacific Relations.

GEORGE S. WEHRWEIN

University of Wisconsin

Revolution in Land, Charles Abrams. New York, Harper and Brothers, 1939. Pp. 320. $3.00.

In his book, *Revolution in Land*, Mr. Abrams presents a challenging analysis of the changing place of land in the American economy. He does more than merely appraise the existing programs and measures of solving the land utilization and housing problems. He traces the development of the growing conflict between the land and industry, and sets forth the more fundamental principles which must be applied in order to find a real solution to the land problem.

In developing the basic background for his thinking, he analyzes the problems of farm and home ownership, the causes of increase in rural and urban tenancy, problems associated with the development of the farm mortgage system, the influence of local tax policy on land use, the need for expansion in the construction industries, and the place of government aid in the solution of the land problem.

He says that the recent activities of the government may mark the beginning of a new era. Land nationalization is not a panacea, he points out, and it does not even have the merit of novelty. It is his philosophy that land nationalization is necessary if a greater group of our population are to be saved from misery. The farmer, as he indicates, is the victim of circumstances over which he has no control, and if he is to be helped the only source of aid is the government. But if this aid is to be effective, it must come from a government that does not think in terms of farm credit and farm mortgages but in terms of the whole land set-up. He suggests that a central land commission be set up to harmonize land activities and to study each phase of the land problem as a part of an integrated whole.

Those of us who are particularly interested in the solution of agricultural problems can agree with Mr. Abrams when he says that as matters stand now, the United States unfortunately is three

decades behind the rest of the civilized world in its treatment of the human and economic problems of land settlement.

His statement that little fundamental theorizing has been done on land economics since the day of Henry George should be a real challenge to our land economists.

JOSEPH ACKERMAN

Farm Foundation
Chicago, Illinois

Our Use of the Land, Ayers Brinser with Ward Shepard. New York, Harper and Brothers, 1939. Pp. xvi+303.

This book is intended primarily for secondary school students, and is appropriately written for this type of reader.

The central theme is the "balance of nature." Man's attempts to disturb this balance for individual gain and government's efforts to alleviate the repercussions are discussed. The avowed purpose of the book is to show the changing relationship of government to people and to land. Seven phases or types of land use are discussed in as many chapters. These are: the land; the farm land; water; the grass lands; the forest; land for wild life and recreation; and minerals. Considerable attention is given to the work of federal agencies in connection with each of these phases of land use.

Just as most history texts for secondary school use color history according to national or even sectional prejudices, so this book colors the results of the federal programs, especially the AAA and the Soil Conservation Service program, in such a way that their desirable characteristics are maximized and their undesirable characteristics are minimized. The author's conclusions, sometimes implied, as to the effectiveness of these programs would be challenged by a large number of well-informed persons. It is suggested that the student use with this book one containing more adverse criticism of the efforts of our governments toward solutions of our land use and related problems.

HOWARD S. TYLER

Cornell University

Does Distribution Cost Too Much?, Paul W. Stewart and J. Frederic Dewhurst. New York, The Twentieth Century Fund, 1939. Pp. 403. $3.50.

This is one of the most important and interesting books ever written on the subject of marketing costs and the efficiency of the

marketing system. It should be of great interest to agricultural economists.

During the decade of the 1930's the emphasis of agricultural economics has been on problems of production adjustment, soil conservation, land use, and farm management. Much less attention has been given to problems of marketing and distribution. Even those of us who are supposed to be working in the field of marketing usually concentrate our efforts on some small segment of the whole field, and few of us are ever able to get a general look at the whole marketing system. When we realize that the farmer gets only about 45 cents of each dollar spent by the consumer for food, and that the other 55 cents represents charges for transportation, processing, and marketing, it is quite apparent that a complete, balanced agricultural program must provide not only rational adjustments on the farm, but also rational adjustments in the marketing system.

The reviewer hopes that no agricultural economist will take seriously the first sentence in the foreword of this report: "The costs of distribution are paid by the ultimate consumer." The reader might easily be misled by this sentence because the same thought is repeated in the second paragraph of the first chapter: "Quite naturally the automobile driver and the cigarette smoker and the housewife begin to wonder if all the costs of placing goods at their disposal are necessary and warranted. And since they themselves have to pay all these costs, they question so great a toll on their purchasing power." If these statements were strictly true the dairyman, for example, would not care particularly whether it cost 2 cents or 10 cents to process and deliver a quart of milk. However, every dairyman knows that high transportation and marketing costs raise prices to the consumer, lower prices to the farmer, and reduce the amount of milk consumed. The dairyman, the wheat grower, the hog producer, and all other farm groups are, and should be, vitally concerned with the efficiency of the whole system of transportation, processing, and distribution.

We might well think of three main steps in the process of studying marketing costs: (1) a comprehensive summary of present costs and charges; (2) an analysis of the reasons for high costs, and studies to show where adjustments may be most needed; and (3) a program for bringing about greater efficiency in the marketing system.

This book does a very good job on the first two of these three steps. It provides an excellent summary of existing facts about marketing costs and price spreads for many different commodities, and reaches the conclusion that for all commodities together the producer got 41 cents of the consumer's dollar in 1929, while the other 59 cents represented marketing charges. Any student of marketing will find here a great deal of useful data on this subject. Moreover, it is well presented and summarized in a usable fashion. A summary of this kind has long been needed.

The book also discusses a number of the reasons for high distribution costs. It comes to the conclusion that distribution does cost too much, and indicates a number of adjustments which might be made to bring about greater efficiency. We shall not attempt to list the proposed adjustments in this review, but feel that the authors have presented several very stimulating and useful suggestions.

The discussion of profits in distribution is of particular interest. The authors show that only about 3 cents of the consumer's dollar goes to pay profits. However, they indicate correctly that this is not a measure of the efficiency of the marketing system. Absence of profits is no indication of efficiency, and for that reason the usual type of cost accounting has little, if any, bearing on the subject discussed by this book. Rather than the usual type of cost accounting, we need for this purpose estimates of what the costs would be under several alternative set-ups.

The chapter on Government regulation and distribution perhaps should have some specific comment. The authors review recent regulatory policies under the Sherman and Federal Trade Commission Acts, the Clayton Act, the N.R.A., The Borah-Van Nuys Act, resale price maintenance laws, the chain store tax laws, and various interstate "trade barriers." No one can read this chapter carefully without concluding that there has been a very remarkable growth of Government regulation in this field, particularly during the past decade. Moreover, he cannot help wondering—as do the authors—what effect these regulations are having and will have on the efficiency of the marketing system.

Of course, most people say they are in favor of efficiency, just as they say they are in favor of honesty and justice, but actually the public seems to be willing to stand for many kinds of regulation which prevent efficiency in marketing. In some cases, of course,

this may be perfectly legitimate. We may purposely decide, as a national policy, that we want family-sized grocery stores and family-sized farms, even though we might have more efficient distribution and more efficient production with larger units. Even so, it is doubtful if the public realizes the extent to which some marketing regulations may hinder efficiency. The analysis on this chapter is very interesting. The reviewer would prefer to see greater emphasis on the short section dealing with "barriers against interstate trade," but this is perhaps a minor criticism.

The authors have made a number of interesting and practical suggestions for adjusting the marketing system to make it work more efficiently. This is well worthwhile. However, there is still another step to be taken in marketing, and one which this book does not attempt. We need very badly some general picture of an ideal marketing and transportation system. This picture ought to show how many creameries, cotton gins, railroad terminals, retail stores, etc. we need; what types and sizes these should be; and where they should be located in order to move commodities from the producer to the consumer at the lowest possible cost. Of course this is a large order, and the reviewer does not intend to criticize this book for not accomplishing it. However, it is a job which needs to be done and it is doubtful if we can have a very rational system of distribution until we do have something of this general kind.

FREDERICK V. WAUGH

Bureau of Agricultural Economics

The Consumers' Cooperative as a Distributive Agency, Orin E. Burley. New York, McGraw-Hill Book Company, 1939. Pp. 338, $3.00.

In the great volume of literature on cooperation, Professor Burley's book stands out as one of the most useful and refreshing that has recently appeared because of its thoroughgoing economic analysis and its specific factual content. While recognizing that cooperatives have other objectives besides the saving of money for their members, he insists that business efficiency is a necessary basis for success in these ventures. For that reason, he devotes his book to the treatment of the consumer cooperative as a marketing agency. According to him, it is best considered as "a type of business enterprise owned by its patrons in order to secure greater economic equity." No matter what else consumer cooperation may

be, whether an institution for social reform or a "way of life," it is basically a business institution. If the broader objectives are to be attained, it must first of all be an efficiently operated business enterprise. Throughout this book, there is a realism and practicality that gives to the study of the subject an emphasis which is much needed as a supplement to the idealistic appeals commonly made in writings about cooperation. This is a sympathetic, but hard headed, treatment of the problems and the possibilities of the cooperatives in the United States. In handling the subject, the functional and institutional approaches have been effectively combined. The book is based on careful, original research and a first hand acquaintance with many of the organizations from which the material has been drawn. It is clearly and interestingly written with specific examples skillfully used to give point to generalizations that are carefully drawn from the evidence accumulated behind the study. The book will prove very useful both for college classes and for general reading.

JOHN M. CASSELS

Institute for Consumer Education
Stephens College

Economics for Consumers, Leland J. Gordon. New York, American Book Company, 1939. Pp. x+638. $3.00.

Leland Gordon's *Economics for Consumers* is informative, readable, organized, ingenious, but not a trail blazer.

The book gives evidence of a struggle with the devil of conflicting approaches, and—Mr. Gordon did not always win. His book is a combination of the "basic consumer wants" and the "consumer marketing" approach to consumer problems. He says that the central theme of his book is consumer welfare, but apparently does not fully realize the cleavage between the approach to consumer welfare which tries to find the fundamental values toward which consumers are striving, and the approach which assumes the goals and is concerned with means of realization. Mr. Gordon does not make a serious, analytical study of basic consumer wants, but he does a very good job with producer control of consumer demand.

"Price Appeal" is on the whole a good chapter, but Mr. Gordon seems to consider value theory only under a purely competitive market situation, ignoring the recently developed treatment of monopolistic competition. The market which Mr. Gordon analyzes is characterized by monopolistic competition. He is critical of

the economic theory which he applies to that situation, but the theory is that which deals with a purely competitive market.

Most of the book is practical, compact, and very useful to consumers as well as to teachers of consumption. The chapters on advertising, cooperatives, and family finance may be recommended particularly. Consumers' cooperatives are treated historically and include attention to the attitudes of labor and businessmen toward cooperatives. The material which deals with family finance in its management or budgeting, and its investment aspects (including insurance) is particularly well-thought-out.

VIOLA WYCKOFF

Iowa State College

Changes in Farm Power and Equipment: Tractors, Trucks and Automobiles, Eugene G. McKibben and R. Austin Griffin. Works Progress Administration National Research Project Report No. A-9, 1938. Pp. xv+114.

Changes in Farm Power and Equipment: Field Implements, Eugene G. McKibben, John A. Hopkins and R. Austin Griffin. Works Progress Administration National Research Project Report No. A-11, 1939. Pp. xvi+111.

These two volumes were issued in connection with the WPA study of recent changes in technology and the effect of these changes on employment. The report on tractors, trucks and automobiles "traces the development and rate of adoption of these three types of automotive equipment" and analyzes some of their effects on farm organization and labor requirements. The more recently issued report on field implements discusses "changes between 1909 and 1936 in sizes and types of the principal field implements used in typical farming areas and the difference in the labor required per acre for the several operations according to the various types and sizes of implements and the power units used with them."

Related information from numerous secondary sources has been brought together. The automotive report is based largely on such information but contains, in addition, some material obtained directly from farmers and from machine manufacturers. The field implement report, although including considerable secondary information, is based largely on the NRP farm survey of 3363 farms in 47 counties located in commercial farming areas in different parts

of the United States. For each of 26 common tillage, seeding or harvesting machines, information is presented on general development, changes in principal sizes and types in use and performance per hour for the various sizes and types.

The two volumes contain a large amount of information and analyses useful as a background for conjecture as to what is likely to happen in the future in the general field of power and equipment and their effects. The books are well written. The analysis of primary information from the survey of farms and also the assembling and interpreting of farm equipment and farm power information from various federal, state and commercial sources constitute a worthwhile contribution. Numerous "gaps" exist in some of the statistical tables of information assembled from secondary sources but these are evidently caused by lack of existing information rather than failure to trace down sources.

LYNN ROBERTSON

Purdue University

Flue-cured Tobacco Farm Management, F. L. Underwood, Virginia Agricultural Experiment Station, Technical Bulletin 64, 1939. Pp. 313.

"The way to make the largest total profit or the highest profit per acre, per hour, or per pound was to produce a relatively large acreage of good tobacco. Growers who achieved these results generally planted the better varieties of priming tobacco on the better soils, applied relatively heavy applications of the higher-analysis fertilizers, and harvested the better quality leaves by priming. . . . The most important factor affecting income variation between farms was the quality of the tobacco crop." Thus concludes Dr. Underwood in his long bulletin on the flue-cured tobacco enterprise of 620 farmers of Pittsylvania County, Virginia.

The analysis is based on data for 1933, which were obtained by trained enumerators who visited the farmers in 1934. In general the method of analysis is that of associating the data by cross-tabulation and generalizing from the results obtained by the association. The income figure used in determining the influence of the various practices is that of labor income (receipts from non-farm sources are included but the value of farm products used in the home is excluded). The tabulations of data are many and exhaustive in detail.

Despite the length of the bulletin, too little is said about the data and the ingenious measures that appear in the tables. This lack of

explanation often leads to confusion. For example, is the value of the unpaid family labor that was used in producing products for family use charged as an expense against the receipts that do not include the value of this domestic production? If it is, then labor income would be unduly depressed, because the total of unpaid family labor and board is approximately 40 per cent of the total expense, and the value of domestic products is about 75 per cent of the total of the receipts as defined. Other readers might be interested in knowing why a large number of farmers worked an equivalent of more than 14 hours per day for 52 weeks of 6 days each.

The past few years have emphasized the struggles of farmers to survive economically. Although Dr. Underwood recognized that the analysis must go farther than merely to state that high receipts and low costs give high profits, there are several things that he might have done which would give more enlightenment in the struggle of the tobacco farmer for survival. Since he is undoubtedly familiar with the conditions in the area, he may legitimately be asked how many farmers cannot or will not adopt the practices deemed to be most profitable. Will the farmers be able to expand their tobacco production with the land they have, or will they require the additional rental or purchase of land? Would this rental or purchase mean a displacement in the number of farmers in the area? Perhaps the answers are implicit in the fact that no attempt is made to show what might happen to labor income if a large number of tobacco farmers were to increase their production of tobacco —in other words, no great change is expected.

On the whole, the bulletin is informative and contains many suggestions for workers in farm management. For those who are interested in the application of commercial fertilizers on the crops of this area the detailed summary of fertilizers used should prove valuable.

ALBERT A. THORNBROUGH

Bureau of Agricultural Economics

The Sociology of Rural Life, T. Lynn Smith. New York, Harper and Brothers, 1940. Pp. xx+595. $3.50.

Professor Smith of Louisiana State University is to be congratulated for writing a text book on the sociology of rural life rather than another review of rural social problems. Also the inclusion of recent research results, particularly from southern states, makes this a somewhat unique work.

The book is composed of five major divisions. The first, the introduction, comments on the scientific method, the nature of rural sociology, and the differences between rural and urban society. The second part describes the rural population characteristics touching on number, distribution, physical characteristics, psychological characteristics, fertility, mortality, and migration. The third division, labeled Rural Social Organization, discusses patterns of settlement and land use and the major social institutions. The fourth part describes the social processes in rural society; and the concluding section contains student exercises and selected readings.

The chapters on characteristics of rural people (Part II) are well done. This is also true of those on Form of Settlement, Land Division, Land Tenure and Size of Holdings as related to rural social organization. However, the latter part of the book on social institutions and social processes is not adequately developed to convey a clear understanding of these phenomena.

This reviewer disagrees with the emphasis given rural-urban differences (Chapter II) which is not balanced with other observations on the same subject. In his opinion the terms rural and urban are seldom adjectives for a dichotomy but are two points on a continuum.

The book is a good text, especially for instructors who wish to emphasize the latest information on rural population characteristics and the rural south.

ROBERT A. POLSON

Cornell University

Five Years of Rural Relief, Waller Wynne, Jr. Washington: Works Progress Administration, Special Report, 1938. Pp. xiii+160.

Rural Families on Relief, Carle C. Zimmerman and Nathan L. Whetten. Washington: Works Progress Administration, Research Monograph XVII, 1938. Pp. xxiv+161.

Five Years of Rural Relief summarizes a survey of public and private relief expenditure in rural and town areas for the period, 1932–1936. It is purely a factual presentation with no attempt at analysis. The written material is all contained in the first thirty-three pages and merely summarizes the chief facts brought out by the tables and charts.

The raw material consists of monthly figures for each area as to the number of agencies reporting, the number of cases served, and the total amount of relief given with respect to private assistance on the one hand and public assistance, classified by types of relief,

on the other. Total relief expenditures for rural and town areas of the United States are estimated on the basis of a sample consisting of 385 counties and townships in 36 states. The three chapters of the report cover aggregate expenditures, trends in expenditures and case loads, and average monthly benefits per case, respectively. The methodology is explained in Appendix B.

The monograph on rural families is based upon a survey taken as of June and October, 1935, covering 116 New England townships and 138 counties representative of 9 major agricultural areas in the east, middle west, and south.

The purpose of the study, as stated in the introduction, is to give a general description of rural relief families and to point out some of their characteristic features. It summarizes information concerning their occupational origin, their size and composition, the age and sex characteristics, and marital condition of the heads of families, fertility rates, employability, employment, amount of relief, mobility, and education of members of the families. These various factors are analyzed on the basis of geographical distribution. Information is given about the racial backgrounds of the families, their former agricultural experience, and their forms of land tenure if they have been engaged in agriculture.

The Assistant Administrator of the Works Progress Administration states in his letter of transmittal to the Administrator that "the findings of this analysis will be of distinct value to relief administrators in rural areas." He might better have said "*could* be of distinct value," for this reviewer finds no indication in the study as to how it might be put to practical use, no appraisal of relief practices in the light of the findings, and no attempt to evaluate the significance for the future of the facts presented. In fairness to the authors, it must be pointed out that venturing into these matters was not their purpose in view of the research policies of the sponsoring agency. However, it is to be sincerely hoped that the tremendous mass of statistical material so painfully gathered by the Works Progress Administration at such great expense will be turned to more constructive use than mere publication in a series of academic fact-recitations carefully set up in a vacuum.

Unquestionably, much valuable and interesting information concerning rural relief expenditures and rural families in the lower income groups is made available in these two studies. The authors have done creditable pieces of work within the limitations of their commissions, and the results should be welcomed by rural sociolo-

gists, students of relief questions, and those local, state, and federal officials concerned with developing an intelligent approach to relief problems.

ROBERT E. RAPP

University of Tennessee

Some Rural Social Agencies in Missouri. C. E. Lively and R. B. Almack, Mo. Agr. Exp. Sta. Res. Bulletin 307, 1939.

The Rural Population Resources of Missouri. C. E. Lively and R. B. Almack, Mo. Agr. Exp. Sta. Res. Bulletin 306, 1939.

The "social agencies" of Misosuri are classified as "educational," "religious," "health," "welfare," "social and recreational," and "socio-economic betterment." The latter category includes two farm organizations, the Farm Bureau, and the Farmers Association. The geographic distribution of units of the various agencies is shown on spot maps of the state, the purpose and function of each is described. The bulletin should be found useful to rural leaders of Missouri, since it will provide information as to existing agencies which may be utilized in planning and executing new programs of rural reconstruction.

The rural population of Missouri is analyzed by Lively and Almack on the basis of Census reports for 1930 and preceding decades. Trends in number and distribution of rural people, in birth and death rates, and in migration are noted. An "approaching stationary condition" in population growth is accepted as inevitable. Of special interest is the discussion of factors which condition the development of population resources (including land area, plane of living, number of dependents, and school attendance), and the relation of farm population to the man-power requirements of agriculture. The authors estimate that 53.8 per cent of the rural-farm males reaching age twenty between 1930 and 1940 will be required to replace the agricultural workers removed by death, retirement and migration. The percentages vary widely in different "cultural areas" of the State.

LOWRY NELSON

University of Minnesota

The Agricultural Industries, Deane W. Malott and Boyce F. Martin, New York. McGraw-Hill Book Co., 1939. Pp. 483. $4.00.

This book is noteworthy in bringing together case descriptions of seven major agricultural industries. The term, agricultural in-

dustries, is used in the text to include the functions of purchasing and processing agricultural raw materials and marketing the manufactured products. Consideration of the purchasing function leads naturally into the field of agricultural marketing. The work does not stop here, however. More than a third of it is devoted to farm production, and this in turn leads into a lengthy description of the Federal adjustment and credit programs as they relate to the commodities under consideration.

A book dealing with the dairy products, meat packing, cotton textile, grain, sugar, tobacco, and woolen industries might well be expected to shed considerable light upon some of the important aspects of agricultural-industrial relationships with which farmers, business men, and statesmen have long been concerned. Farmers and farm leaders have frequently asserted that those who handle farm products on the way to the consumer have been taking an increasing and unduly large share of the consumer's dollar. Others have emphasized the problems created by the tendency toward large-scale organization in the agricultural industries while farm production remains "atomistic." Attempts have been made to justify and popularize farm relief measures on the ground that farm prosperity is essential to industrial prosperity. The volume being reviewed dealing mainly on a descriptive level with processes and channels through which materials pass is disappointing if judged by the criterion of its contribution to an understanding of problems of this nature.

The authors do, however, set forth their views regarding agricultural-industrial relationships. In a brief concluding chapter it is stated that the agricultural industries have performed the great service to the farmer of increasing the demand for farm products by means of advertising and offering the consumer many kinds of products and services. This is said to have accomplished much more for agriculture than have the numerous Government programs of recent years. The situation becomes ironical in view of the fact that these same programs are held to have created many difficulties and few benefits to these industries that have served the farmer best. Unfortunately, these statements as well as other evaluations of Federal programs do not appear to have arisen from any analyses presented and are made without reference to any stated criteria.

The solid body of the book is thoroughgoing and written in a clear, non-technical style. In addition to describing processes and

trade channels it covers trends in volume and in geographical distribution of production and processing. It even goes on to mention by name the larger organizations in each industry together with their more important brand names. Material from a wide range of secondary sources is integrated very successfully with data secured directly from industrial sources. Somewhat surprising perhaps is the almost complete absence of data on price trends, price margins and price policies.

The work apparently is intended primarily as a reference book for business men and as a text for students of business administration. Agricultural economists will find it a useful reference book on the technical phases of the marketing and processing of seven major groups of farm products.

R. H. ALLEN

University of Kentucky

Cooperation to the Finnish, Henry H. Bakken. Madison, Wis. Mimir, 1939. Pp. 220. $2.50.

Finland abounds with cooperatives providing services for everything from births to funerals and from plowing to retailing or exporting finished goods. Selected information regarding them is interspersed with the author's interpretation of developments in Finland, in Finnish cooperation, and in economic theory as it pertains to cooperatives generally in Bakken's book. The introductory section, containing a sketchy history together with a smattering of information regarding the geography and culture of the country, supplies the reader with sufficient background to grasp reasons why Finland has proved to be fertile ground for the growth of cooperative business organizations.

In several succeeding sections in which numerous kinds of cooperatives are described most attention is given to the development of the large federated cooperatives. A distinctive feature of the leading central organizations is a dual type of structure composed of a propaganda unit, on the one hand, which conducts an educational program designed to entice members by advocating reform, and a managerial unit, on the other hand, which acts conservatively to operate an efficient business and hold membership.

For the most part Finland's cooperatives are admirably organized to provide various services, but Finnish experience seems to demonstrate clearly that economic strife cannot be reconciled in cooperative business. The integration of consumer societies and

producer associations has been vertical as well as horizontal and has led to parallel organizations performing the same functions with diverse objectives, or rather with the objective of benefiting different groups of society. Political, racial and regional differences have also led to the duplication of cooperative services by rival associations. These incompatabilities concern the author so he devotes one section of the book to a discussion of their causes and another section to a proposed solution of them.

Bakken contends that "conflicts, disagreements, and misunderstandings between Finnish cooperative societies—should not be regarded as an unusual phenomenon, for wherever men associate with one another, controversies ensue" and "often the underlying cause is simply a biological manifestation." He recognizes that rivalry " . . . has stimulated the growth and encouraged the development of the cooperative movement to the extent that a greater proportion of the (Finnish) population trades by this means rather than by any other," but "factional groups in the population might dispense with the luxury of separate economic organizations and temper their differences with the tangible gains they would reap from their collective business enterprise."

To avoid the present competition between monopolistic cooperatives in Finland, the author advocates a system of complimentary monopolies controlled by producers at one end and consumers at the other end. To facilitate reorganization of the cooperatives on this basis and to preserve order after reorganization is accomplished, he suggests a national council table composed of leaders in cooperative enterprises and conciliation committees including "persons who are competent to appraise the influences of a socio-political nature."

The last section is an appendage which might bear the title of the book with an "n" deleted from the last word. It is a strange conglomeration of ideas from John R. Commons, Thorstein Veblen and Bakken, in which Finland is used as a vehicle to propound a theory of planned economy. The dubious thesis is that cooperatives, because their fundamental objectives are different from those of private or corporate enterprises, could control business cycles.

On the whole the book is attractively illustrated, fairly readable, reasonably informative and highly provocative.

HARRY C. TRELOGAN

Farm Credit Administration

NEWS ITEMS

The Thirteenth Annual Meeting of the Western Farm Economics Association will be held in Pullman, Washington, and Moscow, Idaho, on July 10, 11, and 12.

R. L. Adams, M. R. Benedict and P. S. Taylor of the Division of Agricultural Economics, University of California, read statements before the LaFollette Civil Liberties Committee which recently held hearings in San Francisco on migratory agricultural labor and related problems.

Carl L. Alsberg, Chairman of the Division of Agricultural Economics of the University of California, has been appointed a member of the section committee on economics and sociology of the Eighth American Scientific Congress to be held in Washington, D. C., May 10–18, 1940.

A new book, "Cooperation to the Finnish" of which Professor Henry H. Bakken, Wisconsin, is the author has just recently appeared. This book was prepared on the basis of first-hand evidence obtained by Prof. Bakken on a tour through Finland in the summer of 1938.

Ernest Baughman has been appointed to the extension staff, University of Minnesota, for extension work in agricultural economics.

George T. Blanch, of the Department of Farm Management, Utah State Agricultural College, has been granted a sabbatical leave of absence beginning October 1, 1940 to study at Cornell University.

J. F. Booth, Associate Director of Marketing in charge of Economics, was the Canadian delegate to a meeting of the Permanent Agricultural Committee, International Labour Office, held at Havana, Cuba, November 23 to 30. Two subjects were included on the agenda, one "The Effect of the Present Situation on the Welfare and Standard of Living of Agricultural Populations," and the second "The Development of Social Insurance among Rural Populations of the American States."

Dee Broadbent, who was employed by the Bureau of Agricultural Economics and the Utah Experiment Station, has accepted a position with the Department of Agricultural Economics, Utah State Agricultural College.

C. F. Bortfeld, has accepted a position as Assistant Professor at the North Dakota Agricultural College in September 1939, where

he is engaged in teaching Agricultural Economics during the school year.

Willard O. Brown, Assistant Professor of Agricultural Economics at the North Dakota Agricultural College, was granted a year's leave of absence on January 1, 1940, and has joined the Farm Finance Division of the Bureau of Agricultural Economics. He is stationed at Washington, D. C.

S. L. Clement is on leave of absence from the Department of Agricultural Economics and Rural Sociology, N. C. State College of the University of North Carolina ,for the spring semester of 1940. He is enrolled in the Graduate School at Harvard University.

Lindsay A. Crawford, Assistant Professor of Agricultural Economics in the University of California College of Agriculture at Davis, will be on leave of absence during the second half of 1939–40. Dr. Crawford will be associated with the Berkeley Bank for Cooperatives of the Farm Credit Administration.

Bradford D. Crossmon, formerly in Extension Service, University of Connecticut, has been appointed Research Instructor in Agricultural Economics at Rhode Island State College.

Albert I. Eads has accepted an appointment in farm economics at the University of Kentucky.

W. L. Ettesvold resigned his position at Purdue University to accept the position of Acting Assistant Professor at the North Dakota Agricultural College on January 1, 1940.

Gertrude G. Foelsch, formerly Junior Agricultural Economist, Agricultural Marketing Service, United States Department of Agriculture, Chicago, Illinois, has been appointed Junior Agricultural Economist in the Business Administration Section, Cooperative Research and Service Division, Farm Credit Administration.

Herbert C. Fowler, formerly at Rhode Island State College resigned last October to accept a position in the Division of Farm Management and Costs, United States Bureau of Agricultural Economics.

W. U. Fuhriman, of the Marketing Division at the Utah State Agricultural College, was granted a five-months leave of absence beginning February 1 to June 30, 1940 for a special assignment with the Bureau of Agricultural Economics on Flood Control.

Louis F. Herrmann, until recently, Assistant in Agricultural Economics, West Virginia Agricultural Experiment Station, Morgantown, West Virginia, has been appointed Associate Agricultural

Economist in the Dairy Section, Cooperative Research and Service Division, Farm Credit Administration.

Omer W. Herrmann was sent to Brazil last fall by the Cooperative Research and Service Division of the FCA, for the purpose of studying the new developments in marketing cotton in Brazil. The trip lasted approximately three months. He was accompanied by Sterling C. Evans, president of the Huston Bank for Cooperatives.

The Maine Agricultural Experiment Station in cooperation with the Cooperative Research and Service Division of the Farm Credit Administration is conducting a potato marketing study in Metropolitan Boston. Maynard A. Hincks has accepted a temporary appointment as Assistant Agricultural Economist in the Maine Agricultural Experiment Station to work on this project in cooperation with the Farm Credit Administration.

E. C. Hope, Farm Management Department, University of Saskatchewan, T. W. Grindley, Secretary, Canadian Wheat Board, and A. L. Stevenson, Department of Agriculture, Ottawa, were appointed a committee under the Prairie Farm Assistance Act, to deal with recommendations and applications concerning areas and individuals eligible for assistance under the Act.

Harold F. Hollands, Washington State College, has been appointed Professor of Agricultural Economics, Montana State College.

On February 1, Paul Huefner transferred from the Department of Agricultural Economics, Utah Experiment Station, to a joint employment by the Bureau of Agricultural Economics and Utah Experiment Station on County Planning work.

Clifford Kirkpatrick of the University of Minnesota will give courses at the Harvard Summer School. Other courses will be given by Professor Carle C. Zimmerman, and Professor James Ford.

W. Gordon Leith, who was Research Assistant, Giannini Foundation, University of California, has been appointed Junior Agricultural Economist, Fruit and Vegetable Section, Cooperative Research and Service Division, Farm Credit Administration.

Joseph J. Livers has been appointed Assistant Professor of Mathematics and Agricultural Economics in the Montana State College.

J. N. Mahan, formerly of Louisiana State University, has been appointed Associate Professor of Agricultural Economics at Alabama Polytechnic Institute.

S. C. Mayo has been appointed as Assistant Professor in Rural Sociology at State College, University of North Carolina. His time will be divided between teaching and research.

Donald S. Moore, of Oklahoma Agricultural and Mechanical College, recently joined the staff of the Economic and Credit Research Division, Farm Credit Administration.

Millard Peck was designated Regional Leader of the Division of Land Economics, Bureau of Agricultural Economics, effective July 1, 1939. He has charge of the work of the Division of Land Economics in both the Northern and Southern Great Plains with headquarters at Lincoln, Nebraska.

J. R. Peet of the staff of the Economics Division, Marketing Service, Department of Agriculture, Ottawa, has been appointed Assistant Secretary of the Agricultural Supplies Committee, and I. S. McArthur and H. K. Leckie have undertaken special assignments in connection with the work of the Wartime Prices and Trade Board, the Agricultural Supplies Committee and the Bacon Board. S. E. Griffin of the same Division has been seconded to the British Supply Board, a body set up in Canada to purchase war supplies for the British Government.

Raymond J. Penn has resigned from his position in the Agricultural Economics Department, South Dakota State College, Brookings, effective April 1, 1940, to become Agricultural Economist in the Division of Land Economics, Bureau of Agricultural Economics, U.S.D.A. He will be located at Lincoln, Nebraska.

David Pettus who for the last eighteen months held a General Education Board fellowship at the University of Kentucky joined the staff of the Division of Land Economics of the Bureau of Agricultural Economics. Mr. Pettus is located in Caswell County, North Carolina.

A. E. Richards, Agricultural Economist, and W. F. Chown, Senior Assistant Economist, Division of Economics, Department of Agriculture, Ottawa, have assisted Nova Scotian authorities in the establishment of marketing machinery to deal with the emergency conditions arising out of the apple marketing restrictions imposed by the United Kingdom at the outbreak of the war.

J. B. Rutherford, Secretary, Canadian Agricultural Economics Society, who was in charge of the election of the Canadian members of the Council of the International Conference of Agricultural Economists, has announced the election of the following: Dr. J. E.

Lattimer, Professor Andrew Stewart, and Dr. J. F. Booth, Chairman.

Gordon W. Sprague, Senior Agricultural Economist, Agricultural Marketing Service, United States Department of Agriculture, Chicago, Illinois, has joined the staff of the Business Administration Section, Cooperative Research and Service Division, Farm Credit Administration, as Senior Agricultural Economist.

Morris H. Taylor is now working as Assistant Agricultural Economist on a cooperative project with the Bureau of Agricultural Economics and the North Dakota Agricultural Experiment Station. He is engaged in research in Land Use and Public Finance.

Paul Taylor, Professor of Economics in the University of California at Berkeley, has been appointed Lecturer in Agricultural Economics in the Division of Agricultural Economics on the same campus. Professor Taylor will give a course in Rural Sociology.

Dorothy S. Thomas has been appointed Lecturer on the Giannini Foundation and in the Division of Agricultural Economics, University of California, for the second semester of the academic year, 1939–40.

George E. Toben of the University of Illinois has been appointed to the staff in Agricultural Economics at the University of Minnesota.

Sylvan T. Warrington, formerly Assistant Extension Economist in Marketing, Agricultural Extension Division, University of Minnesota, has been appointed Associate Agricultural Economist, Fruit and Vegetable Section, Cooperative Research and Service Division, Farm Credit Administration.

R. R. Renne, Head of the Department of Agricultural Economics, Montana State College, Bozeman, Montana, spent the winter quarter as a Visiting Professor of Economics at the University of Chicago under a cooperative arrangement with the Farm Foundation.

Everett E. Peterson formerly at Montana State College has accepted a position with the Division of Farm Management and Costs, BAE, at Brookings, South Dakota.

The New England Conference on Family Relations will be held at Harvard University on July 24, 25, and 26.